



InBody[®] USER'S MANUAL

BIOSPACE

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Biospace reserves the right to modify the dimensions or exterior of InBody J10 to improve the quality of the products, without consent of the customer.

HOW TO USE THIS MANUAL

This user's manual explains the functions of InBody J10 in the way that is very detailed and easy to understand. Follow the instructions below for effective use of this manual.

1. Read this manual thoroughly before using the equipment.
2. Take a few moments to look at the pictures or diagrams of the equipments to understand the configuration of the equipment.
3. Read the "Chapter 4. Problems and Solutions" before requesting a warranty service.
4. Read the "Chapter 5. Consumables" when you want to purchase supplies or optional devices.
5. Email or phone us if you experience any inconvenience when using the equipment.
Forward any clinical inquiries at:
E-mail : info@biospace.co.kr TEL : 82-2-501-3939
6. Read signs of warning, precautions and notes carefully. The followings are the visual representations of these signs.



Important information to warn you of situations which might cause an imminent risk of death and/or major injury if instructions are not carefully followed.



Important information to warn you of situations which might cause major injury and/or damage to property if instructions are not carefully followed.



Important information to warn you of situations which might cause minor injury and/or damage to property if instructions are not carefully followed.



Important helpful information for operating InBody J10.

SAFETY INFORMATION

The following is important information to warn you of situations which might cause an imminent risk of death and/or major injury if instructions are not carefully followed.

1. Never use this unit in combination with the following medical electronic device.
 - Medical electronic implants such as pacemakers
 - Electronic life support systems such as an artificial heart/lung
 - Portable electronic medical devices such as an electrocardiograph
 - This equipment may cause the above mentioned medical electronic devices to malfunction.
2. Do not operate within 1 meter from shockwave or microwave therapy equipment.
Avoid simultaneously connecting examinees to InBody J10 and high frequency surgical equipment.

The following is important information to warn you of situations which might cause major injury and / or damage to property if instructions are not carefully followed.

1. Do not operate within 1 meter of other running medical electronic equipment.
This will result in electromagnetic interference or possibly other interference between InBody J10 and that equipment.
2. To prevent fire caused by electricity, always use the standard fuse.
3. To avoid electric shock, be sure to avoid contact between InBody J10 and any kind of external connector or other device that might be connected to a power source.
4. Do not operate this equipment if it has a damaged power cord or plug, if it is not working properly, or if it has been damaged.
5. Do not immerse power cord in water.
6. Do not touch signal parts for external communication such as the parallel port, a serial port, etc. and a human body at the same time.
7. Do not dismantle the equipment. Internal parts are not for customer use. If the unit is dismantled, the warranty is void, and service costs will be charged to you. If service is required, contact Biospace or the supplying agency.

-
8. Individuals with any kind of contagious disease or any kind of injury to the palm or sole must not use or come in contact with this product.
 9. Never start weight reduction or exercise therapy without the instructions of a physician or a specialist. Self-diagnosis may damage your health condition. Consult with your physician before using when pregnant.
 10. This equipment is specifically designed to analyze body composition. Use the equipment only for its intended use as described in this manual.

The following is important information to warn you of situations which might cause minor injury and / or damage to property if instructions are not carefully followed.

1. While moving, installing or using this product, be sure to protect it against any physical shock or damage. Always use the packing material and the original shipping carton when moving or transporting this product.
2. Always operate this product within prescribed ranges of temperature, humidity, and pressure. Operating in ranges outside of those specified may affect the operation of this product, and may cause malfunction.
3. Follow local governing ordinances and recycling plans regarding disposal or recycling of device components.
4. Be careful not to spill or drop any residues of food or beverages on this product. It may cause serious damage to the electronic components.
5. Install or locate the equipment only in accordance with the provided installation instructions.
6. Do not use this equipment near water.
7. This equipment should be serviced only by qualified service personnel.
Contact Biospace for examination, repair or adjustment.
8. Please make sure you place the base frame on a level and stable surface. If the equipment is used when the base frame is unstable because not all feet are on the surface, there may be a risk of stumbling or inaccurate measurement.
Never jump on the base frame, there may be a risk of stumbling and malfunction of the equipment.

Important helpful information for operating InBody J10.

1. This equipment generates, uses and can radiate radio frequency energy and if not installed and used in accordance with the instructions, may cause harmful interference to other devices in the vicinity. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to other devices, which can be determined by turning the equipment off and on the user is encouraged to try to correct the interference by one or more of the following measures:
 - Reorient or relocate the receiving device.
 - Increase the separation between the equipment.
 - Connect the equipment into an outlet on a circuit different from that to which the other device(s) are connected.
 - Consult the manufacturer or field service technician for help.
2. This product has been designed, manufactured, and inspected under the full quality assurance system of Biospace. Biospace fulfills the international standardization system, ISO 9001:2000 and ISO 13485:2003.
3. InBody J10 fulfills the Standards of IEC60601-1 (EN60601-1), Safety of Electric Medical Equipment. In addition, InBody J10 complies not only with the Level A for Noise Immunity but also with Level A for Noise Emission by the Standard IEC60601-1-2 (EN60601-1-2), Electromagnetic Compatibility requirements.

INDICATION & SAFETY SYMBOLS

A. Indication

	9pin serial port, (RS232C, Male)
	Ethernet port (10T Base)
	USB port

B. Safety signs

	Dangerous high voltage		Danger / Warning / Caution / Note
	BF type equipment	 12V  , 3.5A	Adapter
	Turn on the power		Turn off the power

INTRODUCING InBody J10 - THE BODY COMPOSITION ANALYZER.

Human body consists of body water, protein, body fat and mineral. The four elements are the fundamental ingredients constituting the body and the balance between them is essential to our health. Body composition analysis is to quantify and measure these ingredients.

In the past, diagnosing obesity was focused on how we looked outside, without considering the balance among body water, protein, body fat and minerals. From the health point of view, body composition analysis that takes into account the balance between body water, protein, body fat and mineral makes more sense than diagnosing obesity based on how we look. In addition, this is where the body composition analyzer with high precision comes in.

Biospace has invented a professionally sophisticated analyzing device for children named InBody J10 with 10 years technique skills and experiences. InBody J10 figures out an accurate change of body composition through no reliance upon empirical estimation method and all the measurement for each body part to increase the precision and reproducibly. Especially, InBody J10 functions InBody test and height measurement at the same time with automatic anthropometric device attached to the product for easier understanding about their children's development state.

A simple and stylish display screen, and loadings and savings of a result of the measurements are offered for customers to use the product conveniently. In addition, a simple design for easier use and a detail result sheet containing children's growth chart, will satisfy every customer.

Biospace strives to be your partner for health. We are committed to developing high-quality products through transparent management and continuous research and development.

Kichul Cha, CEO

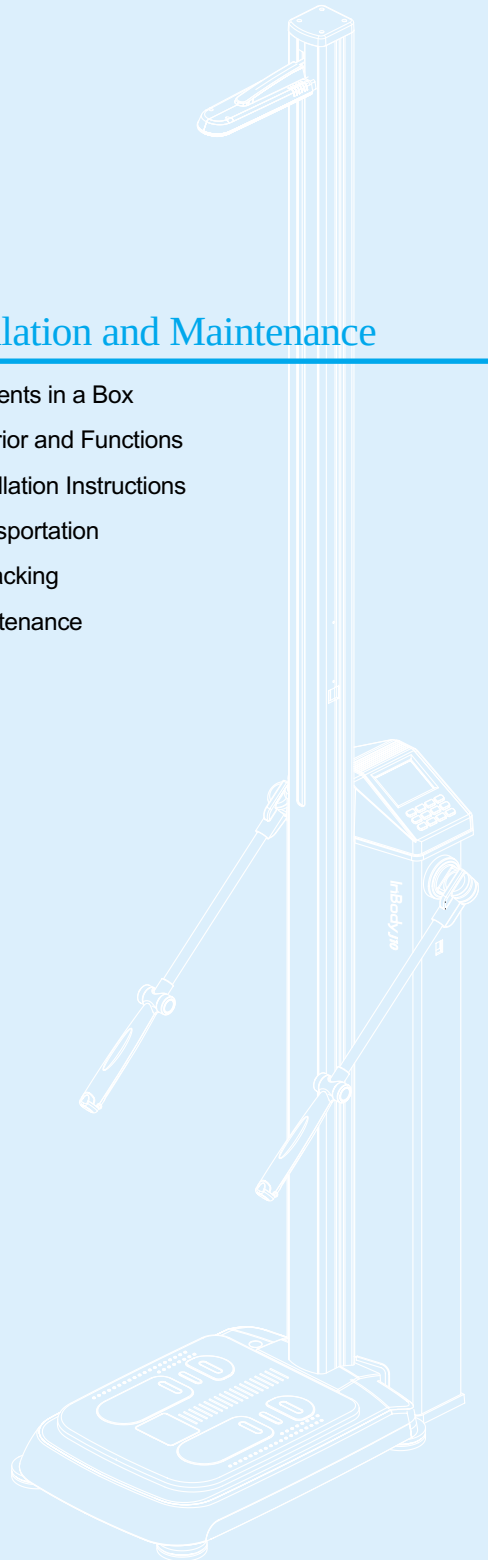


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Chapter 1 Installation and Maintenance

1. Contents in a Box
2. Exterior and Functions
3. Installation Instructions
4. Transportation
5. Repacking
6. Maintenance



1. Contents in a Carton

This product consists of the following units. Make sure your products include all the units.

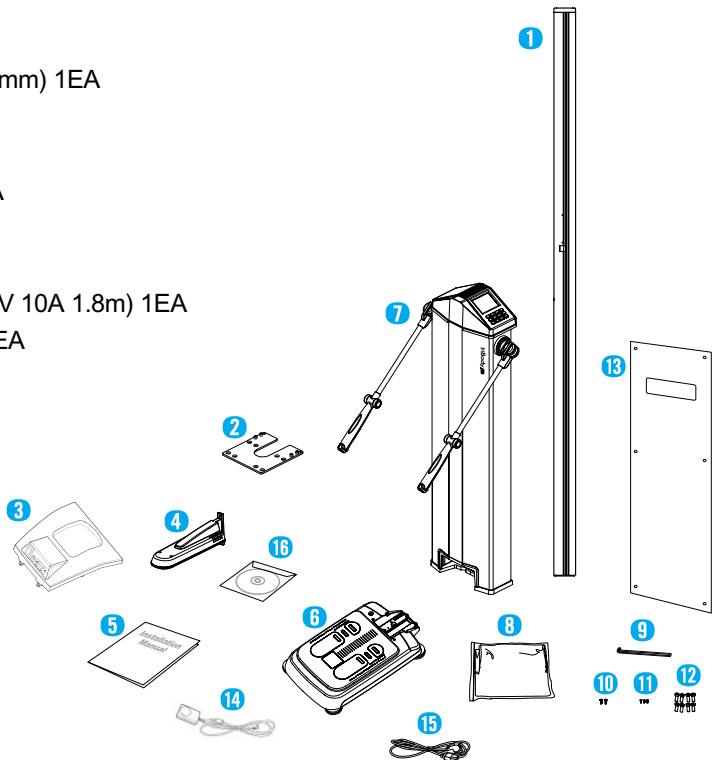
A. Product units

(1) Stand Box

- ① Stand
- ② Stand holding plate
- ③ Joint cover
- ④ Touch bar

(2) Main body box

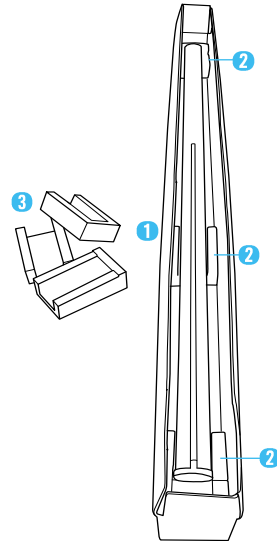
- ⑤ Installation manual 1 copy
- ⑥ Lower part
- ⑦ Upper part
- ⑧ Accessory bag
- ⑨ Hexagonal wrench(6mm) 1EA
- ⑩ Screw(M4 ×8) 2EA
- ⑪ Screw (M4 ×6) 3EA
- ⑫ Screw (M8 ×25) 8EA
- ⑬ Rear part cover 1EA
- ⑭ Power adapter 1EA
- ⑮ Power cable (AC250V 10A 1.8m) 1EA
- ⑯ User's manual CD 1EA



B. Package

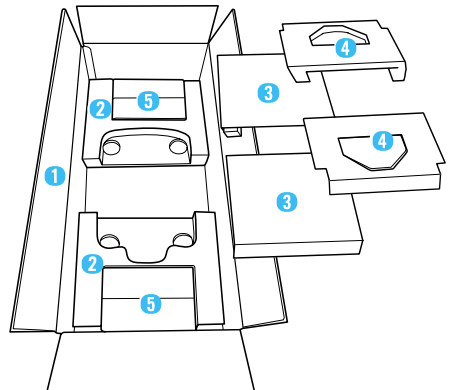
(1) Stand box

- ❶ Stand packing box (2250 × 130 × 130; mm, W × L × H)
- ❷ Bottom pads 3units
- ❸ Top pads 3units



(2) Main body box

- ❶ Main body packing box (1070 × 500 × 290 ; mm, W × L × H)
- ❷ Lower part supporter pads 2units
- ❸ Separation pads 2 units
- ❹ Main body supporter pads 2units
- ❺ Boxes of result sheet 2 units



CAUTION

To reduce the physical impact on the equipment, use the wrapping material provided by the Biospace during shipment or transit. For information on how to relocate the equipment, refer to the Chapter1. "Section4. Transportation."



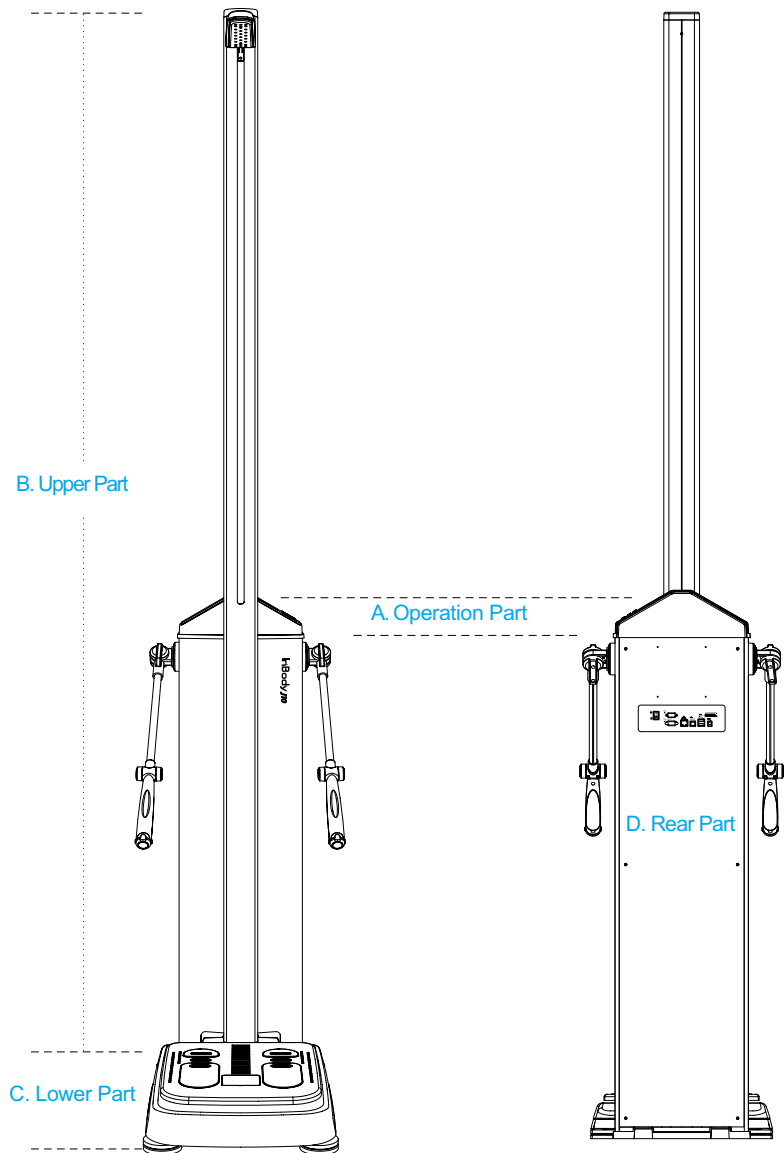
NOTE

Keep the wrapping material with you after installation in the event of relocation.

2. Exterior and Functions

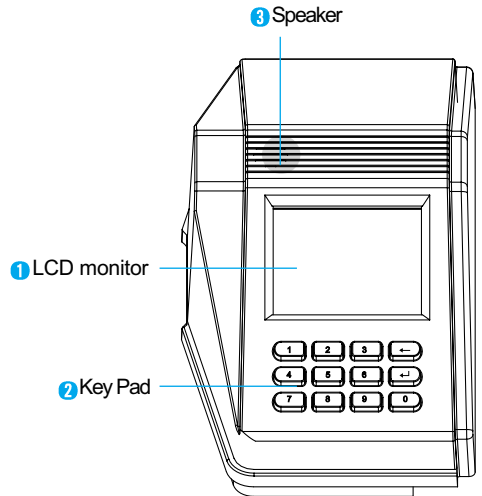
Individual part identification and functions with schematic sketches are provided below. Please inspect each component of InBody J10 before installation to ensure there are no scratches or damage.

- A. Operation Part
- B. Upper Part
- C. Lower Part
- D. Rear Part



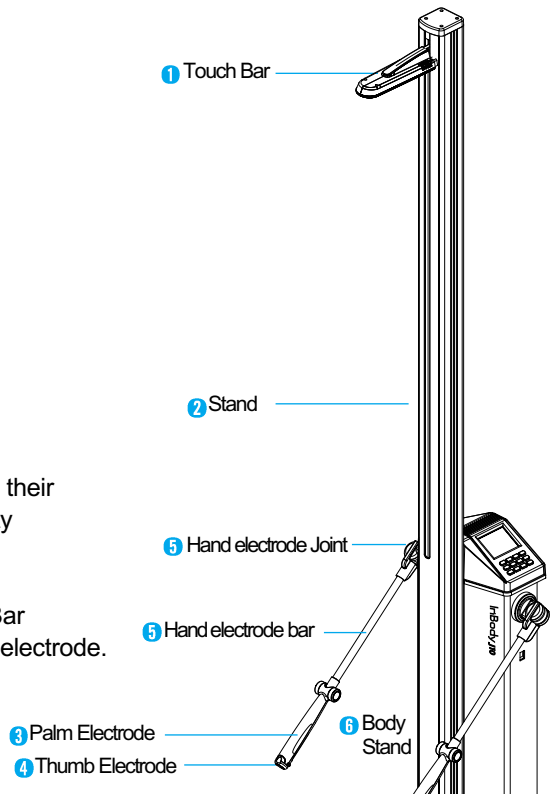
A. Operation Part

- (1) LCD monitor (320 × 240 TFT Color LCD)
The monitor displays the status of progress, message or test results.
- (2) Key Pad (12 buttons)
The keypad is divisible into input buttons and function buttons. The buttons are used to input data required for body composition analysis, set up the operating environment or to print out test results.
- (3) Speaker
Speaker makes beep sounds for note during or after measurement.



B. Upper Part

- (1) Touch Bar
During height measurement process, it touches the top of the head.
- (2) Stand
The main vertical support structure.
- (3) Palm Electrode
Activated by wrapping the palm around the electrode, thus allowing current to flow through the body during measurement.
- (4) Thumb Electrode
This is the area where the examinees press their thumb on to come into contact with electricity during testing.
- (5) Hand Electrode Joint and Hand Electrode Bar
It contains signaling wires, supporting hand electrode.
- (6) Body Stand
The lower support structure for the hand electrodes.



C. Lower Part

(1) Front Sole Electrode

The examinee stands on the foot electrode to come into contact with electricity during testing.

(2) Rear Sole Electrode

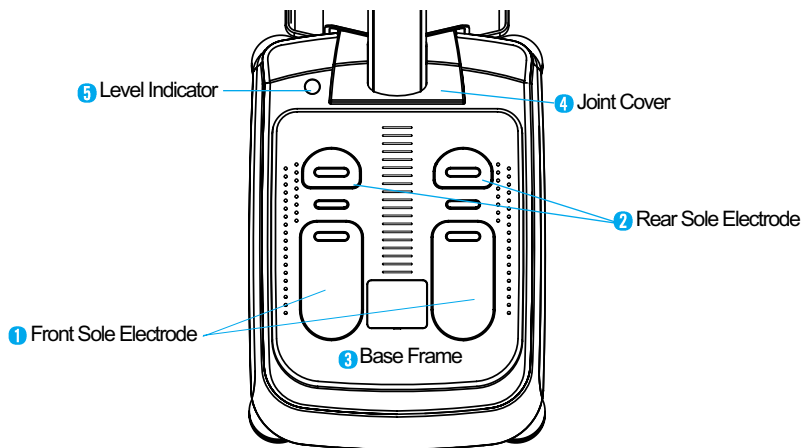
The examinee put their heels on this foot electrode to come into contact with electricity during testing.

(3) Base Frame

The loadcell is connected to the base frame where the examinee stands on.

(4) Joint Cover

The hinge cover with hinges in the middle separates the area connecting the upper and lower part of the equipment.

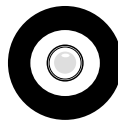


(5) Level Indicator

Check out with the level to determine whether the equipment is level.



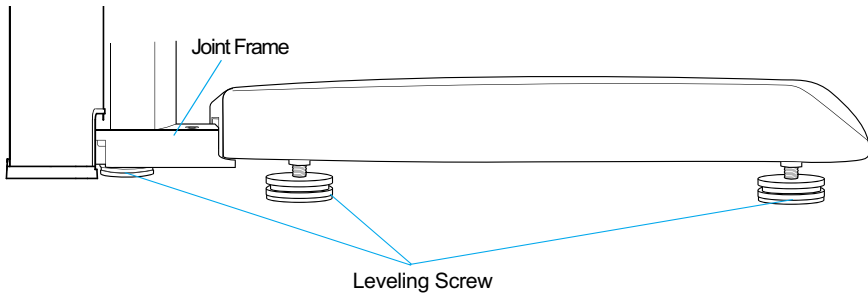
<Un-leveled state>



<Leveled state>

(6) Support Screw

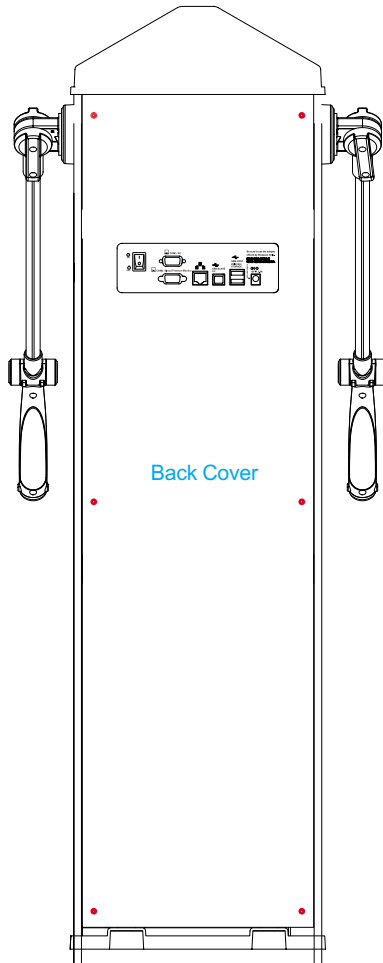
The equipment has five legs screwed into the equipment. You can use the legs to adjust the height and level of the equipment.



D. Rear Part

(1) Back Cover

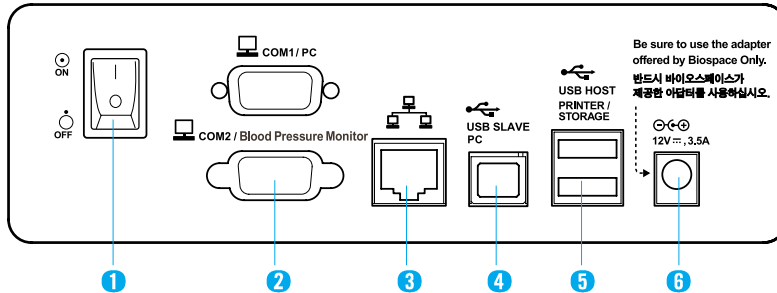
The back cover should be opened only for the purpose of repair. Only the Biospace's technicians are allowed to open the cover.



Biospace is not responsible for damages done on the product or injury caused by the unauthorized opening of the back cover.

(2) Control & Connection Unit

This unit allows the equipment to connect to peripherals such as computers and printers as well as transferring data back and forth.



1 Power Switch

Turn on or off the power of InBody J10.

2 9 pin-Serial Port, Male (RS232C)

Com1 : The terminal, connecting to a personal computer, using Lookin'Body

Com2 : The terminal, connecting to sphygmomanometer (blood pressure units)

3 LAN Port (10T Base)

It can connect to other independent devices with LAN cable for communication (10Mbps).

4 USB Slave Port (Version 1.1)

It can connect to a personal computer, using Lookin'Body.

5 USB Host Port (Version 2.0)

It can connect to USB pint machine and USB saving disk. Any one of 2 USB terminals can be used for the link.

6 Power Input Port

It can connect to a power adapter.



Only the peripherals provided by Biospace can be connected to InBody J10. For any inquiry about peripherals, contact Biospace.



Insert the adapter cable into a power input port thoroughly.



Use only devices or optional equipments provided by Biospace. For any inquiry about the equipments, contact Biospace.

3. Installation Instructions

A. Workplace Requirements

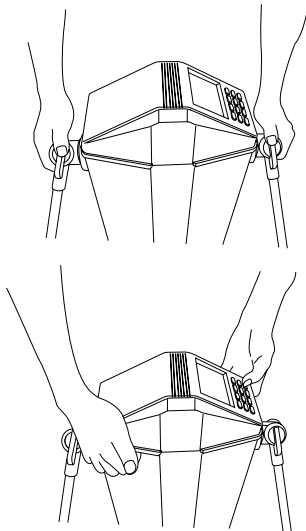
- (1) Location: Indoor only. Any outdoor area where the equipment is to be located should meet all the environmental requirements.
- (2) Operation environment: 50°F~ 104°F (10℃ ~ 40℃), 30 ~ 75% RH
- (3) Optimum pressure: 70 ~ 106kPa
- (4) Adapter
 - Power Input : AC 100-240V, 50/60Hz, 1.2A
 - Power Output : DC 12V, 3.5A

B. Note on Unpacking & Assembling

Be sure to read these suggestions carefully before assembling.

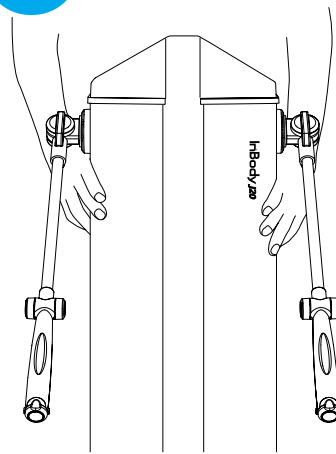
- (1) Place the equipment on the level ground.
- (2) Don't move by holding the hand electrode joints or control part with LCD.

X



< Incorrect >

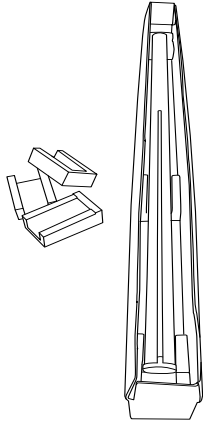
O



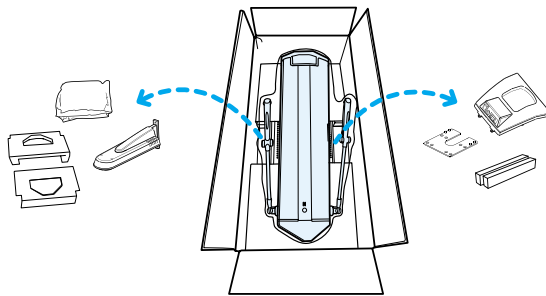
< Corret >

C. Unpacking and Assembling

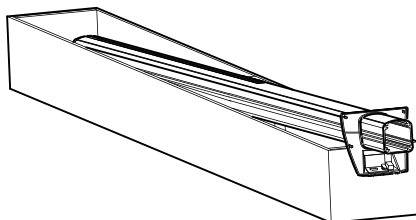
- (1) Open up the top of the stand box and remove the pads.



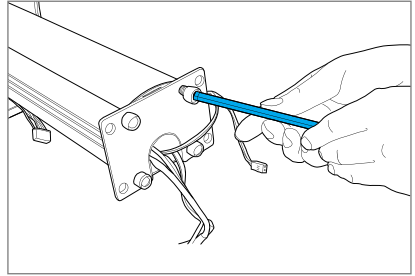
- (2) Open up the top of the main box and take out touch bar, joint cover, stand holding plate, and accessory bag.



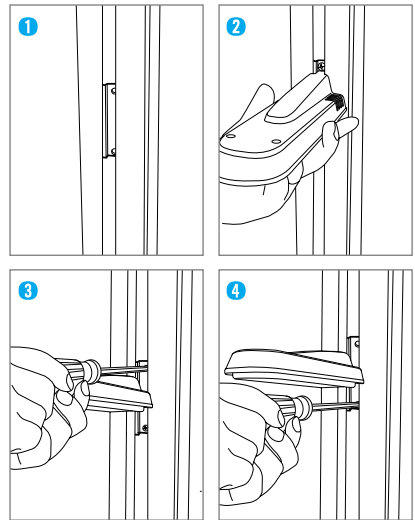
- (3) Tuck the joint cover into the lower part of the stand, leaning the other side of the stand in the box, as shown below.



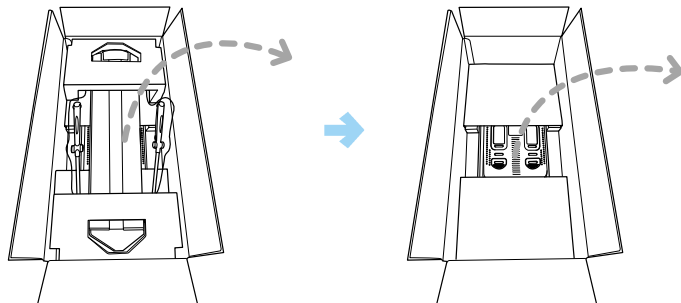
- (4) Attach the stand holding plate on the bottom of the stand tightly with fixing screws (M8 $\times$ 20), using a hexagonal wrench. Fixing screws (M8 $\times$ 20) and a hexagonal wrench are in the accessory bag.



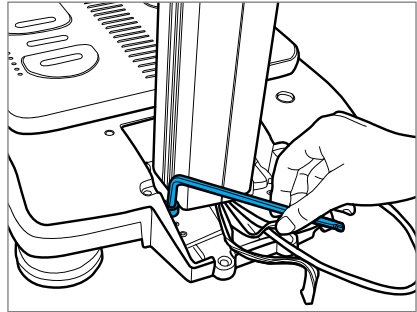
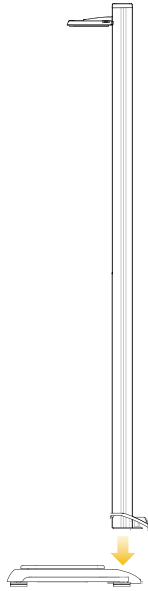
- (5) Fasten the touch bar on the stand. Tighten the connecting screws (M4 $\times$ 8) using a screwdriver. You will find the bracket that fixes the touch bar in the groove on the side of the stand. Align the touch bar with the bracket carefully before fastening the screws.



- (6) From the main body box, take out the lower part which is under the main body. Put the main body back into the box.



- (7) Lift up the stand in the lower part, screw tightly with screws ($M8 \times 25$) using a hexagonal wrench.



CAUTION

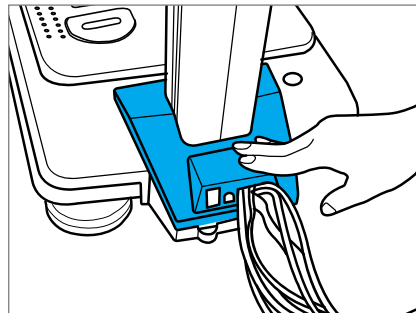
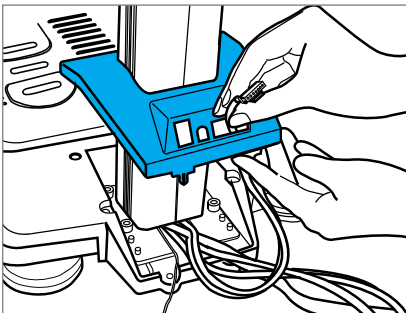
In case of a loose conjunction between the stand and the lower part, measurement process cannot be performed properly. Fix the stand straight-up on the lower part.



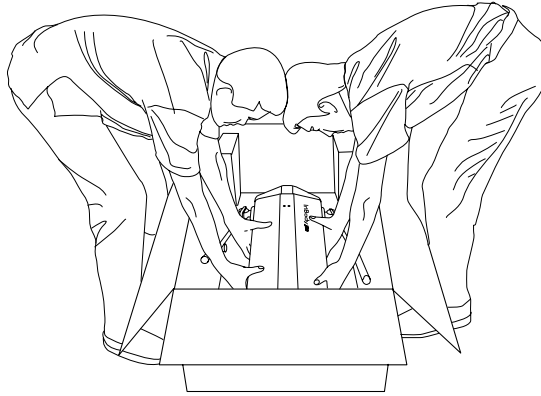
CAUTION

The product should be installed on the flat floor.

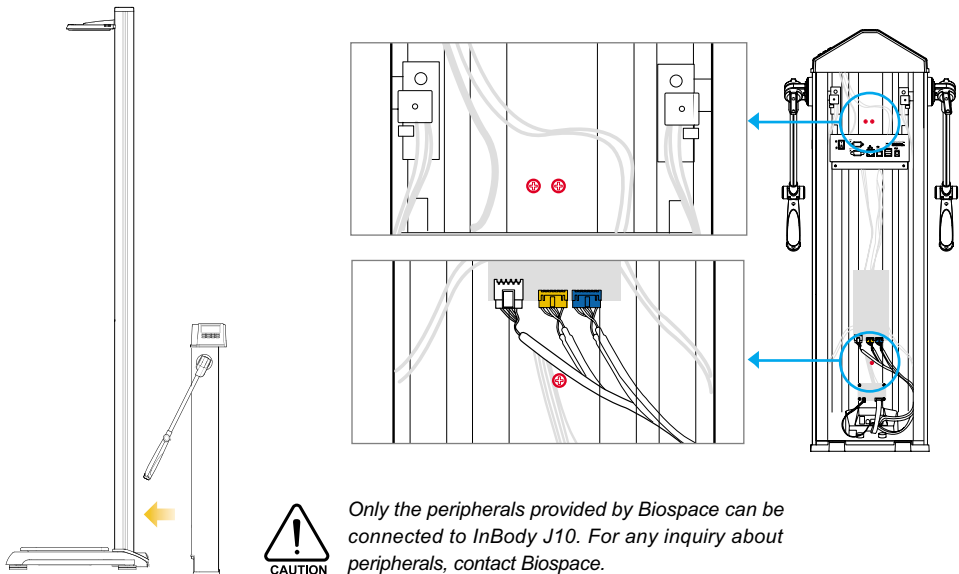
- (8) As the picture below, pull out two cable wires from the bottom part of the stand and three of them from the base frame through the small hole of the joint cover, and set the joint cover on the lower part.



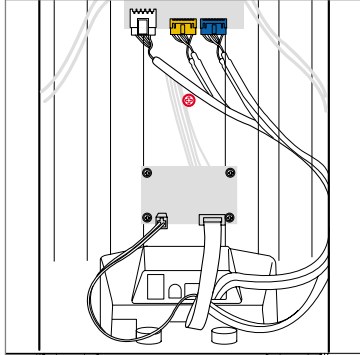
- (9) Take out the upper part from the main box.



- (10) As the picture below, combine the stand and the upper part. Screw tightly with screws ($M4 \times 6$) using cross-tip screwdriver. There are 2 points on the top and 1 point to be screwed on the bottom of the control and joint part.

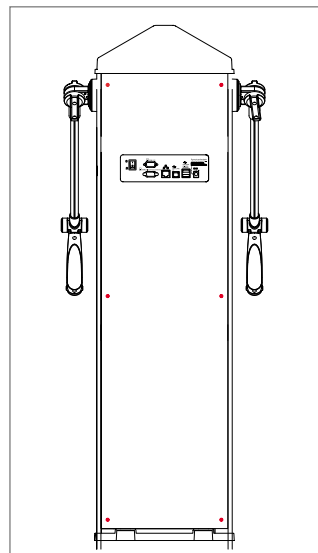
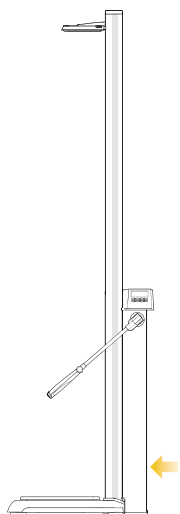


- (11) Five cable wires, coming out from the joint cover (step 8), should be linked to the cable connectors by matching the same color and shape. Two cable wires have to be plugged into the lower connector and three cable wires have to be plugged into the higher connector.



Do not pull out the cable wires, which is already connected to the product. A bad contact of cable wires could be one reason for malfunction of the product.

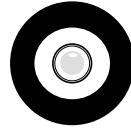
- (12) Take out the back cover from the main box, set it up by screwing tightly with screws (M3 × 6) with cross-tip screwdriver.



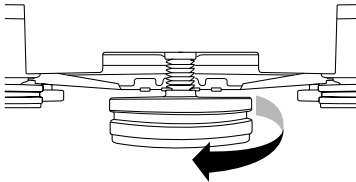
- (13) Check out the level indicator to keep the horizontality of the product.
Controlling the supporting screw, keep the even level state.



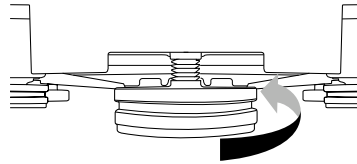
<No even level state>



<Even level state>



<Raise-up>



<Raise-down>

4. Transportation

If it must be transported, be extra careful to ensure safe handling. The following are some tips for safety transporting InBody J10.

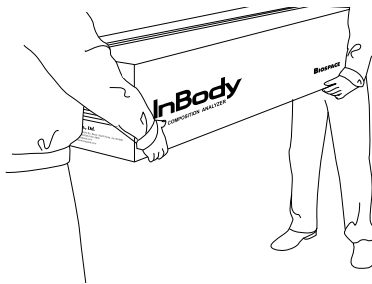
- (1) Before transporting InBody J10, turn off the power switch and unplug the adapter.
- (2) Be careful not to damage the hand module.
- (3) After moving InBody J10, ensure that it is placed horizontal to the ground.

A. Environmental Requirements

- (1) Optimum Temperature: -20℃ ~70℃ (-4°F~158°F)
- (2) Relative Humidity: 10%~95%
- (3) Optimum Pressure : 50kPa~106kPa

B. Transporting Before Installation

Before installation, InBody J10 is shipped in the box designed by Biospace. For safety, have two people move it by holding both sides or used handling equipment such as a cart or dolly.



Be careful with fragile freight. The package has fragile operation parts including LCD, which has the sign on the box.



After relocating InBody J10, make sure it is level again. Inaccurate leveling will affect accuracy of individual weight measurements.

C. Transporting After Installation

Do not move InBody J10 once installed by Biospace or authorized distributors of Biospace. If the equipment must be moved again after the original installation, it is recommended to pack InBody J10 in the original box, using the original packing materials. Biospace recommend you do not discard the original packing material.

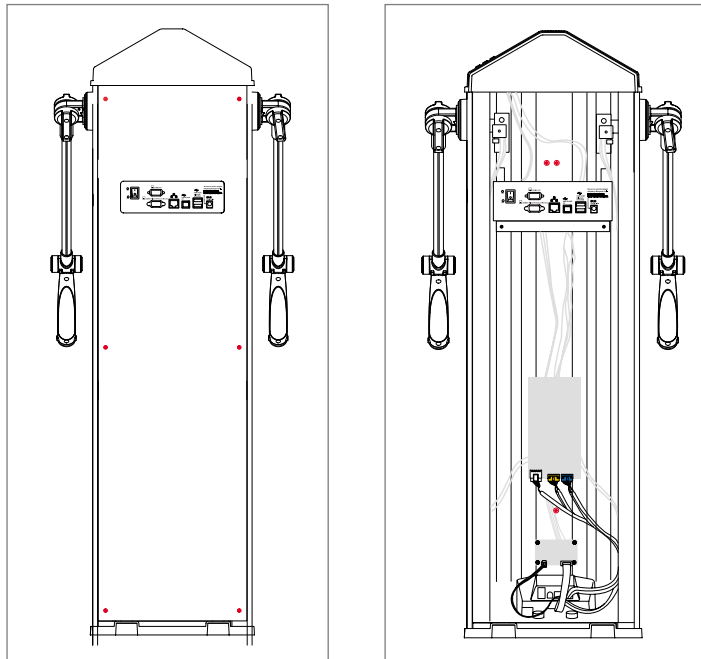


After relocating InBody J10, make sure it is level again. Inaccurate leveling will affect the accuracy of individual weight measurements.

5. Repacking

Prior to disassembling and repackaging the equipment, turn the power off and pull the plug off the outlet. Take appropriate precautions not to damage foot and hand electrode during repackaging.

- (1) Unplug the product and remove the power adapter.
- (2) Open up the back cover with cross-tip screwdriver.



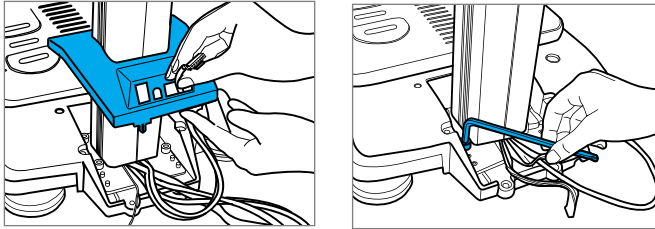
- (3) Separate five cables out of eight ones, linked to cable connector. There are three cables from the upper connector and two from the lower connector.
- (4) Separate the upper part from the stand with cross-tip screwdriver. There are 2 points on the top and 1 point on the bottom to be unscrewed.
- (5) Lift up the joint cover, and pull out the cables carefully.



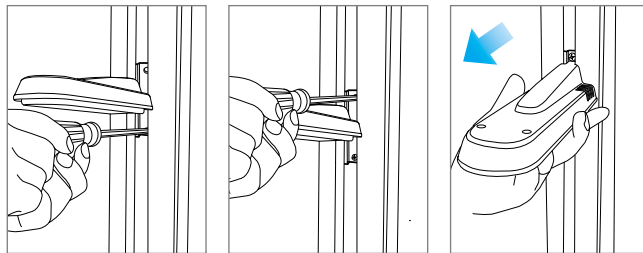
CAUTION

Do not pull out the cables, which is already connected to the product. A bad contact of cable wires could be one reason for malfunction of the product.

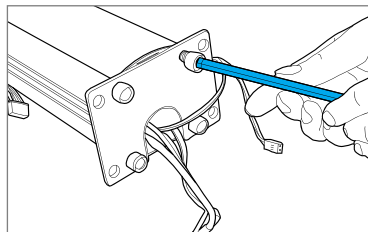
- (6) Unscrew set screws holding the stand on the lower part.



- (7) Separate the touch bar from the stand with a cross-tip screwdriver. Loosen the screw with a screwdriver.



- (8) Separate the stand holding plate from the stand with a hexagonal wrench.



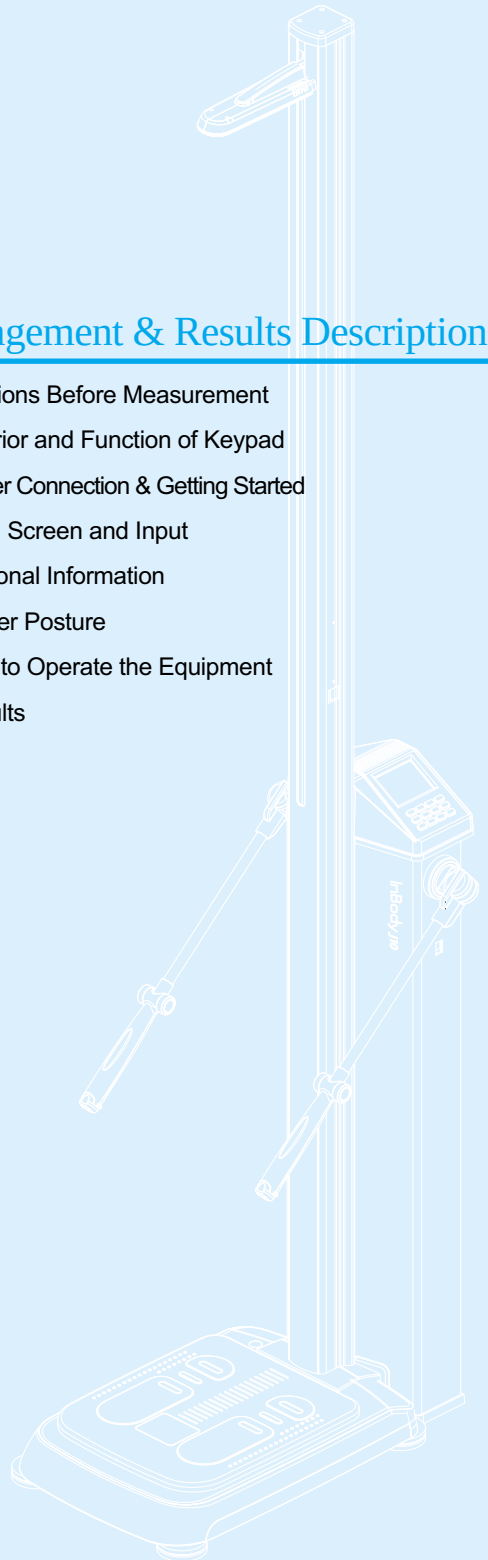
- (9) Pull out the joint cover from the stand.
- (10) The stand puts into the stand box and the lower part puts into the main body box, with packing pads.
- (11) Pack the upper part, the back cover and packing pad into the main body box.
- (12) Put set screws and a hexagonal wrench in the accessory bag, and place the accessory bag, touch bar, the joint cover and stand holding plate in the main body box.
- (13) Close all the boxes and tape them to seal.

6. Maintenance

- (1) After usage wipe electrodes with a wet tissue (also known as wet naps, surface wipes, anti-bacterial tissues, etc.). Wet tissues can be purchased at any local store.
- (2) Handle the arms with care. Never apply excessive stress near the hand electrode joint. The damage caused by misuse may affect the function of the internal cable and electric board.
- (3) Do not place anything on the base frame nor apply any pressure onto it when the InBody J10 is not in use.
- (4) When InBody J10 is not in use for a period longer than one day, unplug the adapter.
- (5) Do not move or relocate InBody J10 while the power is on.
- (6) Do not drop food or drinks on the equipment.
They may affect the electrical parts in the equipment or cause damage.
- (7) Once a week, wipe the exterior sides of InBody J10 with a dry towel. In particular, clean the LCD monitor, softly with care not to scratch the surface.
- (8) Follow local governing ordinances and recycling plans regarding disposal or recycling of device components.

Chapter 2 Management & Results Description

1. Cautions Before Measurement
2. Exterior and Function of Keypad
3. Power Connection & Getting Started
4. Initial Screen and Input
5. Personal Information
6. Proper Posture
7. How to Operate the Equipment
8. Results

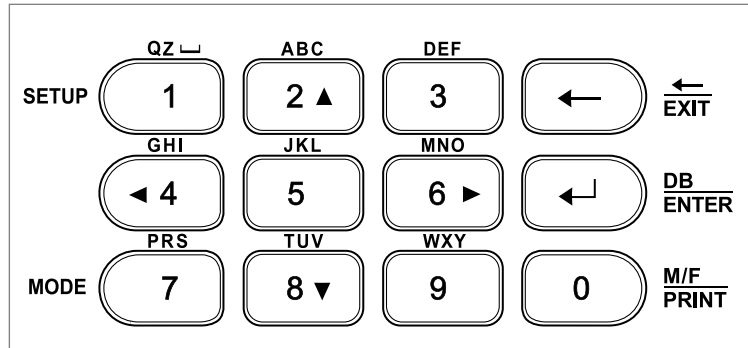


1. Cautions Before Measurement

To observe changes of the human body through body composition analysis, it is crucial to perform the analysis each time under the same conditions, temperature, posture, etc. Bear in mind, the following factors affect the result of body composition analysis, and as a result, affect the reproducibility of analysis.

- (1) Do not exercise or perform any physical tasks before testing. If a examinee has already been physically active, a temporary change in body composition will result.
- (2) Do not eat before measurement.
If a examinee already ate, wait 2 hours for digestion.
- (3) Do not take a bath or shower prior to measurement.
Perspiring (sweating) that occurs that also results in a temporary change in body composition.
- (4) Perform the measurement under normal temperature conditions 68~77 °F (20~25 °C).
If the ambient temperature is too high or too low, the human body responds, resulting in temporary changes in body composition.
- (5) Perform the measurement after urination or excretion, if possible. Residues inside the human body are interpreted as fat mass. Waste in the body means the analysis will be less accurate.
- (6) Measurement should be done before mid-day. In the afternoon, after being mobile all day, more body water will accumulate in the lower body, yielding an unequal distribution

2. Exterior and Function of Keypad



(1) Number Buttons (0~9) / Alphabet Buttons (A ~ Z)

The input buttons are used to enter numeric and character data such as the examinee's age, height and I.D.. When a button is pressed, the LCD screen shows the numeric and then character representations of the button in the alphabetical order.

For instance, press the button 2, then you will see a set of numeric and character representations assigned to the button showing up in the pre-determined order of 2, A, B and C.

(2) ← / Exit Button

This button is used to delete data that was entered or to finish the set up.

(3) DB/ENTER Button

It is used to finish data input, to move on the next step and to save the change of the set up. In addition, it is also used to search the saved results.

(4) Gender Selection/Print (-0) Button

It is used to type "0" or select the gender. And also it is used to print the last saved result.

(5) SETUP (-1) Button

It is used to type "1", or update or modify the user environment.

(6) MODE (-7) Button

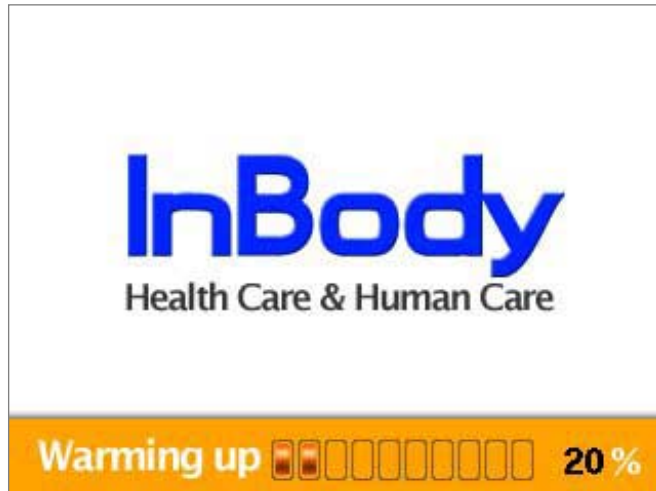
It is used to type "7" or execute the extra functions like printing and deletion in database screen.

(7) Direction Button (▲, ▼, ◀, ▶ 4 buttons)

The 4 direction movements are available. (Upward, Downward, Left, and Right)

3. Power Connection and Getting Started

- (1) Connect the adapter cable to the power input port.
- (2) When system switch is turned on, the screen is displayed as illustrated below and starts warming-up by itself.



- (3) During warming-up, InBody J10 processes the self-testing, zero setup for the scale, and adjustment of the internal circuit. Also, it checks the usage status of the peripherals registered in Setup menu and displays it on the state window of the screen.
- (4) As warming up processes, the state bar shows the current main set-up with a beep sound which means that it is ready to measure a new data.



WARNING

When connecting peripherals (printers and other optional devices) to InBody J10, turn on the peripherals and then InBody J10. When turning the power off, turn off InBody J10 first before the peripherals. This process will minimize the harm on the equipment caused by electric shock.



NOTE

Do not put weight on the lower part of the equipment from the point when you turn the power on to when InBody J10 finishes booting process. If you go on the stand or put any object on it, the system reports error with initializing the weight as zero, and it results in inaccurate measurement.

4. Initial Screen and Input

(1) Main Window

It tells all of the measuring processes in InBody tests. It provides an useful guideline for customers, showing the results of height, weight, ID information, body composition analysis.

(2) State Bar

It shows the units for measurement, the numbers of printing, weight control, the modes for height, and sound set-up.



5. Personal Information

Age, height, weight and gender are the key personal information required to analyze the body composition. To reduce the probabilities of an error and to obtain reliable results, follow the instructions presented below.

- (1) I.D. (permissible range of input : 20 characters)
Use the numeric buttons to enter data. With each button press, numbers or alphabets are displayed in the sequence shown on the keypad.
- (2) Gender selection
Female is set as an initial value for gender selection. It means that male users should change that one for a right process. To change the gender or gender selection, read the "Chapter 3" for instructions of it.
- (3) Date of birth
Type the last 2 digit numbers for the year of the birth and also 2 digit numbers for the month of the birth in a row. For instance, 9701 => January in 1997.
- (4) Height (the range : within 950mm ~ 2200mm or 3ft. 1.4in.~ 7ft. 2.6in)
A measured height is automatically displayed. If 'INPUT' mode is set for set-up menu, InBody J10 does not measure the user's height automatically. The value for height should be typed for this case in one decimal point.

(5) Weight

InBody J10 automatically starts to measure the user's weight, as soon as the person stands on the weight scale. The measured weight value is automatically shown in the weight section on the screen. If 'INPUT' mode is set at the set-up menu, InBody J10 does not measure the user's weight automatically. The value for weight should be typed for this case in one decimal point.



The unit of the weight and the height are described in the way of InBody J10 set-ups.

(6) Input information modification

Here are the steps for corrections of the wrong data input.

- ❶ In case of a wrong data found in the inputting process,
Delete the wrong one with '←/ Exit' button and type again.
- ❷ In case of a wrong data found after the inputting process
Move the cursor to the section to modify on the screen with '←/ Exit' button,
and delete the wrong data with '←/ Exit' button to type again.
- ❸ In case of a wrong data found during measuring process, No way to get the wrong data corrected except restarting after stepping down to the floor.

6. Proper Posture

Proper posture is essential to achieve reliable results and high reproducibility. Observing the following methodology is essential to achieving reliable results and accuracy. Palms, fingers and soles should be in contact with electrode during the testing. Keep the following instructions in mind during testing.

A. How to hold the hand electrodes

- (1) Make parallel, flat contact with four fingers on the surface of the electrode.
- (2) Place thumb on the electrode pad on the top surface of the handle. Touch lightly, do not press with nails, and do not press down too hard.
- (3) When holding the grips, make sure your thumbs are covering the circular electrodes and hold them with the rest of your hands.



Do not press the electrodes with the fingernails: fingernails may damage the electrodes and cause inaccurate results.

B. How to stand on foot electrodes

- (1) Bare feet must be in contact with the electrode foot pads.
- (2) First, place the heel on the circular electrode.
- (3) Place sole on the elliptical electrode surface.

C. Body Posture

The proper posture for measurement is standing straight and having your arms and legs spread naturally. A more accurate measurement will be made if the person loses his clothes or accessories as the weight is more precise. Take off heavy coats or watches so that the measured weight would be closer to your actual weight.

- (1) Turn your back towards the stand and stand on the foot board.
- (2) Do not lean on the stand with the knee stretched, pull your belly and chest and look straight forward.
- (3) While measuring, do not strain your body and maintain a relaxed posture.



If the examinee leans on the stand, the weight might get distributed and the results can be inaccurate. Be careful not to lean on the stand.



If a person finds it hard to maintain a proper measuring pose due to physical conditions, he/she can get help by having someone hold his/her arm from the side or from the back. In this case, be careful there is no skin contact between the helper and the examinee. If both feet do not contact the electrodes, measurement is impossible.



7. How to Operate the Equipment

The following procedure is based on the initial setting of InBody J10. If a examinee steps down from InBody J10 during measurement the procedure is automatically cancelled.

A. Body Composition Analysis

- (1) Confirm if InBody J10 is in the preparation state for measurement. In that case, a display screen is shown like the picture below.



- (2) Take off all of the accessories and the watches and heavy outwears for more accurate and precise result for weight measurement and consequently the Body Composition Analysis.
- (3) User should put the bare feet on the sole-electrode in the right position; each pole of one sole-electrode (left/right) should be contacted by the front side foot and the other one by the back side foot. As soon as the user steps on InBody J10, the window screen automatically turns to the weight measurement screen and begins to measure the weight with beep sound. If 'manual' mode is set at the set-up menu, InBody J10 does not measure the user's weight automatically. Measure the weight by pushing 'DB/ENTER' button.

Do not lean against the stand during a measuring process, keep the hands low and pose the relaxed body position. Measured weight is displayed when stable value of weight is taken. The measured weight is automatically inputted. User can control the zero value for weight scale to ignore the outfit weight for a more accurate result. Read for a detailed content in "Chapter 3. Setup Establishment".



- (4) After weight measurement, the height measurement window screen appears with a beep sound, and starts to measure the actual height. If 'MANUAL' mode is set at the set-up menu, InBody J10 does not measure the user's height automatically. Start height measurement by pressing 'DB/ENTER' button with having a right pose. Apply the measured height value for body composition analysis by pushing 'DB/ENTER' button. If the measured value seems wrong, measure it again by pressing '←/Exit' button.



- (5) After height measurement, it shows the blanks to be filled out for personal information. Type the data in order of ID, gender and date of birth. The measured values of weight and height are automatically indicated.



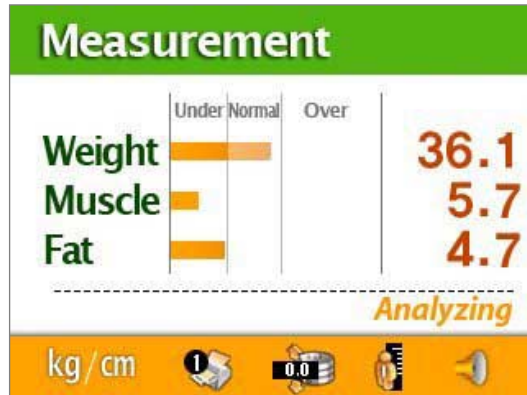
During the process of personal information recording, if the value is not within the acceptable range, the message pops up on the screen, saying "Wrong input data. Please do again."



Wrong input data
Please do again

Try again: ENTER

- (6) After typing the personal information, by pressing 'DB /ENTER' button, the message pops up on the screen, saying "Pose as shown on the screen" with a beep sound. InBody J10 confirms the body position constantly. After confirmation, the measurement is automatically processed, showing the information about body composition and the message, "Analyzing". Once the test is underway, the examinee should keep the same posture until the end of the test.



In cases of user's wrong body position like bad contacts between hands and hand electrodes and feet and the sole electrodes or user's too dried (or keratinized) hands and feet, InBody informs users, popping up the message, "Try again after wiping hands and feet." Wash out the whole hands and feet thoroughly with an electrolyte tissue.



- (7) The message of the measurement completion comes up after it is done.



- (8) Step down to the floor.



Do not bend or roll out the hand electrode forcefully. It could cause a break down of the product.

- (9) The printer will print out the result sheet, in case of needing more result sheet, simply push 'PRINT' button. Refer to 'Section 8: Results' in this chapter.

B. BMI measurement mode

Check out that 'Simple BMI Measuring Mode' is initially set.
Refer to p6 of the 'Chapter. 3' for set-up method.

- (1) Check if the product is in test-ready status. In that case, the initial window screen looks like the picture below.



- (2) Stand on the base frame for weight measurement. Do not lean against the stand during a measuring process, and keep the hands low and pose the relaxed body position. It shows the measured weight. Users can control the zero value for weight scale to ignore the outfit weight for more accurate result. Refer to 'Chapter 3. Setup Establishment' for the detailed explanation.



- (3) After weight measurement, it moves on the height measurement window screen with a beep sound, and starts to measure the actual height.

If 'MANUAL' mode is set at the set-up menu, InBody J10 does not measure the user's height automatically after weight measurement. Start the height measurement with 'DB/ENTER' button, keeping the right body pose continuously. If the measured value seems wrong, measure it again by pressing '←/Exit' button.



- (4) Step down to the floor. Examinee can see their weight, height and BMI on the LCD screen.



Even after the process in BMI measurement mode, you may start InBody test by inputting personal information. After the weight and height measurement, press 'DB/ENTER' button to input personal information with standing on the base frame. After typing the date of birth, gender, ID information, press 'DB/ENTER' button to process body composition analysis.

8. Results

A. Result sheet for child

If you choose to print a report for child at the setup (please refer to p3-4 in 'Chapter. 3' for set-up method), below result sheet will be printed.

InBody

ID HYK	Age 11	Height 131.7 cm	Weight 25.1 kg	Gender F	Date/Time 2007.10.12/09:23:50	[InBody 110]	A Health Centre	What's my growth score? 59 Points
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Let's discover what my body is made up of

Occupying most of my body	Body Water	14.9 kg	Nutrition Evaluation Protein ☐ Enough ☒ Too little Mineral ☒ Enough ☐ Too little Body Fat ☐ Enough ☒ Too little ☐ Too much
Making muscle	Protein	3.9 kg	
Making bones strong	Mineral	1.61 kg	
Storing extra energy	Body Fat	4.7 kg	

Shall we check if my body is well balanced?

My total **Weight** 25.1 kg

For a great body shape **Muscle** 9.9 kg

Am I storing too much **Body Fat** 4.7 kg

UNIT: kg

Under Normal Over

Connect the end of the graphs to see what shape it makes—a 'D' shape is great.

Is my body growing well?

Left Right

※ How to look at the body shape graph

Upper body developed / Upper - Lower body underdeveloped / Lower body developed

※ How to understand the body shape square range

too little
little enough
standard
very good

Let's have a look at the size and shape of the square. The bigger and more square the shape, the better, meaning your muscle is well developed.

My height and weight compared to my friends

height

weight

If the height and weight are at the 50% mark then you are right in the middle state of growth compared to other children. If under 10% or over 90%, special care can be required.

Evaluation of my body

Ideal to my body composition	Weight 29.5 kg	BMI 14.4 kg/m ²	☒ normal ☐ over
You need to change	Weight + 4.4 kg	PBF 18.7 %	☒ normal ☐ slightly over ☐ very over
You need to change	Muscle Mass + 2.1 kg	OD 85 %	☒ normal ☐ over ☐ very over
You need to change	Body Fat + 2.3 kg	BMR 811 kcal	☒ normal ☐ over

note

Impedance Z 54Hz 601.2 596.8 522.9 389.5 382.7 50kHz 562.8 557.4 29.1 359.7 353.1 250kHz 518.3 512.5 24.5 329.5 325.0	RA	LA	TR	RL	LL
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Output items

This section includes definition, description and clinical standard of each category of the test results. If you need more explanation or clarification on this manual, email or call us at:
E-mail : info@biospace.co.kr TEL : 82-2-501-3939

(1) Individual Information

Examinee's I.D., age, height, weight, gender and exam date and time are displayed.

(2) User Information

The name of the hospital or clinic and the doctor in charge are displayed.

ID	Age	Height	Weight	Gender	Date/Time	[InBody J10]	
HYK	11	131.7 cm	25.1 kg	F	2007.10.12/09:23:50		A Health Centre

*Please contact Biospace Co., Ltd. or sales division if you need to enter or correct "User Information".

(3) Let's discover what my body is made up of.

Let's discover what my body is made up of						
Occupying most of my body	Body Water	14.9	kg	Nutrition Evaluation	Protein	☐ Enough ☒ Too little
Making muscle	Protein	3.9	kg		Mineral	☒ Enough ☐ Too little
Making bones strong	Mineral	1.61	kg		Body Fat	☐ Enough ☒ Too much
Storing extra energy	Body Fat	4.7	kg			

This part provides quantitative value of the body composition. Alongside with the measured value of each body composition, there is nutrition evaluation to help children understanding. It would be good to explain what roles proteins, minerals, fattiness play in our body and what problems might occur when these are lacking or excessed.

① Body Water (kg)

It covers the largest portion among body composition accounting for about 50~70% of body weight. It is distributed in the cells and body fluids. If we look into our body with composition point of view, it is like a systemized sea water bag. Body water is mostly distributed at the cells which compose the muscle tissue. Over 70% of water fills healthy person's muscle while there are less in minerals and body fat.

② Protein (kg)

Protein is a complex of organic compounds with nitrogen and it indicates the total amount of solid components. Protein has very close relationship with intracellular fluid. Therefore lack of protein means nutrition imbalance. However this differs from the protein in food.

If there is a severe shortage in protein mass, it can bring symptoms such as loss of nails and toenails, amenorrhea, hair discoloring, muscle atrophy, fatty liver, edema, etc.. Human body consumes body composing proteins when there is shortage in energy provision in body. This is an undesirable energy generation process and if excessive rates of such process continue for a long time of period, it could burden liver, kidney and others. Particularly for growing children, protein is an essential component. During a growth period various parts of our body are developed especially skeletal structure and muscle mass. Therefore, it is necessary to have sufficient amount of protein during a growth period since major components of muscle is protein.

3 Mineral (kg)

Minerals help the body preserve stand . InBody analyzes two large groups of minerals: osseous minerals and non-osseous minerals. Osseous minerals are the minerals found in the bones while non-osseous minerals are those found in all other parts of the body. Osseous minerals account for about 80% of the body's total minerals. The quantity of minerals found in the body is closely related to the muscle mass. As muscle mass increases, the weight of bones also increases.

During a growth period when there is a dramatic growth in bones, it is necessary to have a sufficient amount of mineral to ensure the smooth development of skeleton structure.

4 Body Fat (kg)

Fat free mass is the sum of body water, protein and mineral. Thus, InBody uses the following formula to get the amount of body fat mass.

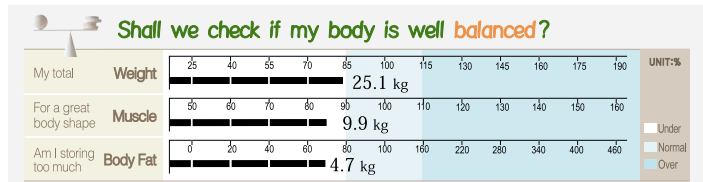
$$\text{Body Fat Mass} = \text{Body Weight} - \text{Fat Free Mass(FFM)}$$

The sum of body water, protein mass, mineral mass, and body fat mass, constitutes the weight.

Body Fat Mass is stored under the skin, as well as between the abdomen and muscles.

When examinee's body fat mass is beyond standard range, he/she is diagnosed as obese.

(4) Shall we check if my body is well balanced?



This part shows the value of weight, skeletal muscle mass, body fat mass, and relative comparison in figures using bar graphs. Numbers next to the bar indicate the measured values of each composition while the length of the graphs shows the percentages against ideal values for each. One hundred percentage of the normal range refers to the ideal values of each composition based on examinee's ideal weight. Thus it is easy to recognize the balance of body components through the relative lengths of bar graphs against the 100% ideal values.

1 Weight (kg)

100% ideal weight indicates the ideal value for the examinee's height. Ideal weight is obtained from BMI ideal weight calculation.

$$\text{Ideal weight (kg)} = \text{Ideal BMI (kg/m}^2\text{)} / \text{the square of the height in meters (m}^2\text{)}$$

Ideal BMI follows young children's BMI by height and gender.

2 Skeletal Muscle Mass (kg)

Muscle in this part refers to the skeletal muscles attached to the bone. 100% ideal skeletal muscle mass indicates the ideal amount of skeletal muscle mass that one should have when the examinee has an ideal weight.

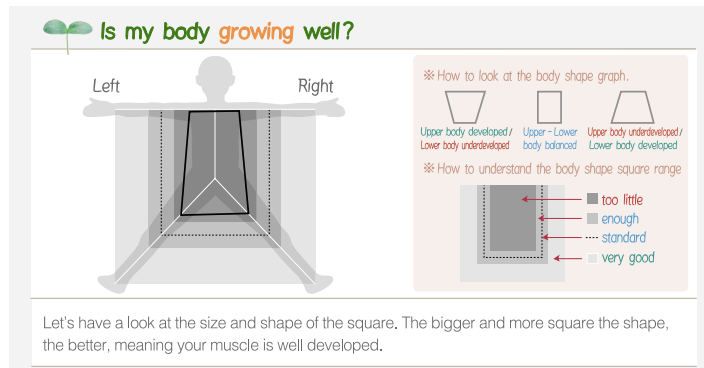
In particular, as bone development actively progresses during a growth period, it is necessary to have a well-developed skeletal muscle mass to support smooth growth of bones.

3 Body Fat Mass (kg)

100% ideal body fat mass is the amount of body fat mass one should have when one has an ideal weight. The bar graph shows the percentage of the current body fat mass divided by ideal body fat mass to display the degree of appropriate amount of body fat.

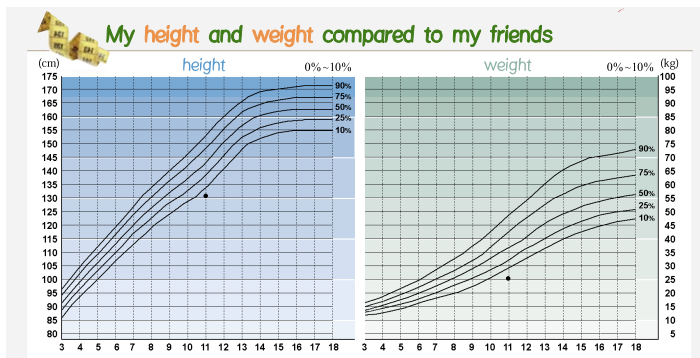
Ideal body fat mass is what one should have when one has an ideal weight.

(5) Is my body growing well?



In the body model, we look at the shape of the square and in which range each vertex falls in. The shape of square allows the evaluation of an individual body parts such as upper and lower balance, and left and right balance. Also using the range in which each vertex belongs, we can see the muscle development in limbs.

(6) My height and weight compared to my friends.



This part is to check a examinee's developmental status through a percentile graph that enlarges a growth curve according to his/her age and gender.

Percentile is a score that shows one's relative position in the distribution of the group to which he/she belongs. The 50th percentile (50%) indicates a mean value, and if it is closer to the 50th percentile, it means one's growth is at a rate close to the middle.

However, there is no need to worry if one falls between the 10th percentile (10%) and the 90th percentile (90%), rather than the 50th percentile. But if one is lower than the 10th percentile (10%) or higher than the 90th percentile (90%), careful attention is required for the child's growth.

(7) Evaluation of my body

Evaluation of my body						
Ideal to my body composition	Weight	29.5 kg	BMI Body Mass Index	14.4 kg/m ²	☒ normal	☐ over
You need to change	Weight	+ 4.4 kg	PBF Percentage Body Fat	18.7 %	☒ normal	☐ slightly over
You need to change	Muscle Mass	+ 2.1 kg	OD Obesity Degree	85 %	☒ normal	☐ over weight
You need to change	Body Fat	+ 2.3 kg	BMR Basal Metabolic Rate	811 kcal	☒ normal	☐ under

1 Weight Control

For growing children, it is not a good idea to blindly lose weight to achieve an ideal weight. It would be advisable to maintain ideal body components by monitoring muscle mass and the amount of body fat.

2 BMI

The ideal BMI for children below 18 years old differs from each other by height and gender. The standard BMI range is within ± 3 of ideal BMI.

< Ideal BMI-3	under
Ideal BMI-3 $\leq$ ~ < Ideal BMI+3	normal
Ideal BMI+3 $\leq$ ~ < Ideal BMI+6	over
Ideal BMI+6 $\leq$	very over

3 Percentage Body Fat

Children below 18 years old have different ideal body fat rates depending on their gender and weight. The standard range is within $\pm 5\%$ of ideal body fat rates. Slight overweight refers to a stage with a risk of overweight and is when one has larger than or equal to $+5\%$ of an ideal body fat rates and less than $+10\%$ of an ideal body fat rates. Overweight is when body fat rate is larger than or equal to $+10\%$ of an ideal body fat rate.

4 Obesity Degree(%)

Obesity Degree(%)= (current weight/ standard weight by height) $\times 100$

Obesity index Degree is an index that determines obesity without considering individual body composition. The standard range stretches from above 90% and below 110%. Above 110% and below 130% is overweight and above 130% indicates obesity.

5 Basal Metabolic Rates (BMR)

Basal Metabolic Rate (BMR) is a value obtained by substituting the fat free mass of current test examinee to a formula. The standard range stretches from above 90% and below 110%. Less than 90% indicates below standard and above 110% is regarded as above the standard BMR. Ideal BMR is a value obtained by substituting the ideal fat free mass of a test examinee to a formula.

(8) What's my growth score?

What's my
growth score?

59 Points

Growth score is a unique value of InBody that shows test results in recognizable scores in order to help understanding the growth state of children by taking into account of physique and body components. It considers not only children's body composition but also obesity index degree, and physique such as height and weight.

B. Result sheet for adult

InBody

ID SKM00079-0008

Age 30

Height 163

Gender Male

Date 2007.06.11

Time 11 : 45 : 55(608)

BIOSPACE

TEL:02-501-3939, FAX:02-501-3978

Doctor Lee

Body Composition Analysis

	Values	Soft Lean Mass	Fat Free Mass	Weight	Normal Range
T B W (L)	35.7	46.1	48.4	59.2	32.9 ~ 40.2
Protein (kg)	9.8				8.8 ~ 10.8
Mineral (kg)	2.85				3.04 ~ 3.72
Body Fat Mass (kg)	10.8				7.0 ~ 14.0

▶ Mineral is estimated.

Muscle-Fat Analysis

	Under	Normal	Over	Normal Range
Weight (kg)				49.7 ~ 67.2
S M M (kg)				24.8 ~ 30.3
Body Fat Mass (kg)				7.0 ~ 14.0

Obesity Diagnosis

	Under	Normal	Over	Normal Range
B M I (kg/m ²)				18.5 ~ 23.0
P B F (%)				10.0 ~ 20.0
W H R				0.75 ~ 0.85

Exercise Planner

Plan your weekly exercises from the followings and estimate your weight loss from those activities.

Energy expenditure of each activity (base weight : 59.2kg / Duration: 30 min./unit : kcal)

Walking 118	Jogging 207	Bicycle 178	Swim 207	Mountain Climbing 193	Aerobic 207
Table tennis 134	Tennis 178	Football 207	Oriental Fencing 296	Gate ball 112	Badminton 134
Racket ball 296	Tae kwon-do 296	Squash 296	Basketball 178	Rope jumping 207	Golf 104
Push-ups development of upper body	Sit-ups abdominal muscle training	Weight training backbone prevention	Dumbbell exercise muscle strength	Elastic band muscle strength	Squats maintenance of lower body muscle

How to do

- Choose practicable and preferable activities from the left.
- Energy expenditure for each is calculated when it is done for 30 min.
- Choose exercises that you are going to do for 7 days.
- Calculate the total energy expenditure for a week.
- Estimate expected total weight loss for a month using the formula shown below.

Calculation for expected total weight loss for a month (one month = 4weeks)
Total energy expenditure (kcal/week) x 4weeks ÷ 7700

Segmental Lean

Lean Mass Evaluation

3.1kg Normal

2.6kg Normal

Trunk 23.2kg Under

7.8kg Under

7.9kg Under

Fitness Score

77 Points

Basal Metabolic Rate

1414 kcal (1348 ~ 1566)

Impedance

Z	RA	LA	TR	RL	LL
5 kHz	320.0	253.4	46.5	258.4	255.7
50 kHz	275.1	229.3	34.0	222.9	223.0
250 kHz	243.9	200.6	27.1	197.2	198.1

Segmental Fat

PBF Fat Mass Evaluation

10.0% Under

0.4kg Under

16.8% Normal

0.6kg Normal

Trunk 17.5% 5.2kg

18.2% Normal

1.8kg Normal

18.3% Normal

1.8kg Normal

▶ Segmental Fat is estimated.

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Output Items

The following are the definitions and explanation for each item analyzed on the results sheet.

(1) Individual Information

The examinee's I.D., age, height, gender, and date of measurement are displayed here.

(2) User Information

According to the user's purpose, the name of the hospital or clinic, address, contact number and the doctor in charge are displayed here.

ID	SKM00079-0008	Height	163	Date	2007.06.11	BIOSPACE
Age	30	Gender	Male	Time	11 : 45 : 55(608)	TEL:02-501-3939, FAX:02-501+3978 Doctor Lee



If you want to create or modify user information, contact Biospace or distributor.

(3) Body Composition

The measured values of the examinee's body composition are displayed here.

The body composition analysis of InBody J10 divides body composition into 4 components.

These 4 compartments have a settled ratio in healthy body.

Body Composition Analysis

	Values	Soft Lean Mass	Fat Free Mass	Weight	Normal Range
T B W (ℓ) Total Body Water	35.7	46.1	48.4	59.2	32.9 ~ 40.2
Protein (kg)	9.8				8.8 ~ 10.8
Mineral (kg)	2.85	non-osseous osseous: 2.27			3.04 ~ 3.72
Body Fat Mass (kg)	10.8	7.0 ~ 14.0			

- Total Body Water (ℓ)

The total volume of water in the body.

* The basic unit of measurement for water is volume. Water is shown with the unit of liter on the results sheet while kilogram (kg) is the basic unit for other body composition components.

It seems that the unit volume of water should be converted to a mass unit. However, it is commonly known that 1liter of water in volume weighs 1kg in mass at room temperature. This fact allows volume and mass to be interchangeable.

- Protein Mass (kg)

The mass of protein. Protein is a major component of limb muscle, intestinal muscle, and skin.

- Mineral Mass (kg)

The sum of osseous mineral in the bone and non-osseous mineral in body fluid.

- Body Fat Mass (kg)

The sum of subcutaneous fat, visceral fat, and intramuscular fat.

- Soft Lean Mass (kg)

The mass of Fat Free Mass except osseous mineral in the bone.

- Fat Free Mass (kg)

The sum of all body compartments but fat.

- Weight (kg)

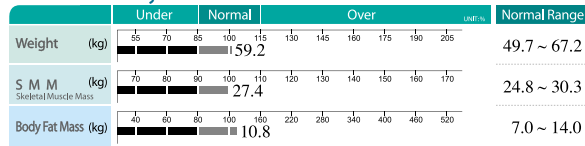
(4) Muscle-Fat analysis

Bar graphs and values for Weight, Skeletal Muscle Mass and Body Fat Mass are displayed here. The length of bar graph shows a percentage relative to the standard value (100%) and the value at the end of each bar is the measured value. The standard value (100%) is based on the standard weight of the examinee.

When an examinee is on a diet or exercising for weight control, body fat mass and skeletal muscle mass get affected among the body compartments. Therefore, you can keep monitoring the changes of body fat mass and skeletal muscle mass performing a weight control program.

Also, you can see the body composition goes along your expect.

Muscle-Fat Analysis



- **Weight (kg)**

Ideal weight is based on examinee's height. Using the classical BMI method, InBody J10 identifies the standard BMI as 22kg/m² for males, 21.5kg/m² for western females and 21kg/m² for Asian females.

Formula to get ideal weight

(male) Ideal weight = height²(m²) × 22

(female) Ideal weight = height²(m²) × 21.5 (or 21)

The standard range of weight is 85~115% based on the standard range of BMI.

- **Skeletal Muscle Mass (kg)**

Distinctively, skeletal muscle mass, which generally indicates the lean body mass of each arm and leg, can be controlled by exercise and dietary habits. Compare the bar graphs' lengths of skeletal muscle mass with body fat mass. If the bar of skeletal muscle mass is relatively shorter and under the standard value, lean body mass lacks in the body, while the opposite case is proper. 100% signifies ideal lean body mass when examinee's weight is normal.

The standard range is 90~110% of standard skeletal muscle mass based on standard weight.

- **Body Fat Mass (kg)**

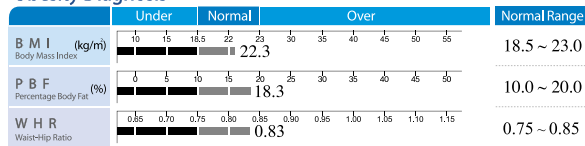
100% signifies ideal body fat mass when examinee has standard weight and standard Percentage Body Fat. The standard range is 80~160% of ideal body fat mass.

**The standard range varies for the each item because the variation rates of muscle and fat are not same in normal condition.*

(5) Obesity Diagnosis

This enables examinees to check BMI, the classical method for obesity diagnosis, Percentage Body Fat and waist-hip ratio all at once. Bar graphs and numeric values are provided for each item and both of the length of bar graph and the number represent the absolute value. The ranges of Under, Normal and Over make easier to compare each graph.

Obesity Diagnosis



- BMI (Body Mass Index, kg/m²)

BMI is determined by using only weight and height and diagnoses superficial obesity. The standard values are 22kg/m² for male and 21.5kg/m² for western female and 21kg/m² for asian female.

Formula) BMI = weight (kg) ÷ height² (m²)

Determination 1) WHO Standard

BMI(kg/m ²)	Classification		Diagnosis
<18.5	Underweight	Under	Infectious disease, malnutrition related disease
18.5~24.9	Normal	Standard	Least risk at most disease
25.0~29.9	Overweight	Over	May cause health problem
30.0~34.9	Obese1		Increase of the risk of cardiac disease, high blood pressure, diabetes, etc.
35.0~39.9	Obese2		
>40	Severely Obese		

Ref. WHO and the National Heart, Lung, and Blood Institute : clinical guidelines on the identification, evaluation, and treatment of over weight and obesity in adults, the evidence report. June 1998, xiv

Determination 2) Asian-Pacific Standard

BMI(kg/m ²)	Classification	Risk of associated disease
<18.5	Underweight	Low (high risk of other clinical disease)
18.5~22.9	Normal	Average
>23		Overweight
23~24.9	Risky Overweight	Increased
25.0~29.9	Obese step1	Moderate
>30	Obese step2	Severe

Ref. Korean Society for the Study of Obesity, chapter 2. Redefining and Evaluation, The Asian-Pacific perspective : Redefining Obesity and its Treatment:, 1st edition, Korean Society for the Study of Obesity, 2001, p10.

* For children under the age of 18, children's standard is used.

- Percentage Body Fat (%)

Percentage Body Fat indicates the percentage of body fat to body weight. The ideal Percentage Body Fat is 15% for men and 23% for women, while the standard range of percentage body fat for men is 10-20% and 18-28% for women. In the case of children under the age of 18, children's standard is used.

Ref. Samuel J. Fomon, et al. (1982): Body Composition of reference children from birth to age 10 years. The American Journal of Clinical Nutrition 35, 1169-1175.

- Waist-Hip Ratio

Waist-Hip Ratio (WHR) means the ratio of waist and hip circumference.

InBody J10 yields WHR value saving the effort of tape measurement, using the principle which figures out body size with segmental bioimpedance and reference of empirical factors.

The standard ranges are 0.80~0.90 for male and 0.75~0.85 for female.

Abdominal obesity is diagnosed in case of over 0.90 for male and 0.85 for female.

Measuring Waist-Hip Ratio

Waist circumference : at the umbilical point

Hip circumference : at the widest point of hip

Ref.

1. Judith E. Brown, *Nutrition Now*, 2nd edition, pp9-8, published by West/Wadsworth, 1999.

2. NIH, *Bioelectrical impedance analysis in body composition measurement* : National Institute of Health, 1996. *Technology Assessment Conference Statement*, 524S-532S, December 12-14, 1994.

(6) Various Comprehensive Evaluation

A summary of the body composition analysis displayed on the results sheet enables to check the results at a glance. This will help clients to comprehend their health condition.

As using different colors, it even distinguishes the poor and the fine conditions.

- Nutrition Evaluation
- Weight Management
- Obesity Diagnosis

Nutritional Evaluation	
Protein	☒ Normal ☐ Deficient
Mineral	☐ Normal ☒ Deficient
Fat	☒ Normal ☐ Deficient ☐ Excessive
Weight Management	
Weight	☒ Normal ☐ Under ☐ Over
SMM	☒ Normal ☐ Strong ☐ Under
Fat	☒ Normal ☐ Under ☐ Over
Obesity Diagnosis	
BMI	☒ Normal ☐ Under ☐ Over ☐ Extremely Over
PBF	☒ Normal ☐ Over ☐ Extremely Over
WHR	☒ Normal ☐ Over ☐ Extremely Over

(7) Weight Control

Weight control suggests fat and muscle control that leads to the balanced body composition to achieve ideal body composition. The (+) and (-) signs indicate an increase or decrease in the amount of control.

Weight Control

Weight Control	- 0.8 kg
Fat Control	- 2.1 kg
Muscle Control	+ 1.3 kg

- Weight Control (kg)

The sum of the fat and the muscle control value, showing amount of weight to be controlled.

$$\text{Weight Control} = \text{Fat Control} + \text{Muscle Control}$$

- Fat Control (kg)

The amount of fat to be controlled for optimum body fat mass based on the results of body composition analysis.

- Muscle Control (kg)

The amount of muscle to be controlled for optimum muscle mass based on the results of body composition analysis.

**If fat mass is over the standard, it is suggested to lose fat. However, no suggestion for muscle loss is offered in the case of muscle excess. Although muscle is often lost during weight control, there is no document supporting intended muscle loss. Therefore, InBody J10 proposes 0.0kg for muscle control, which means no muscle control needed', when a examinee is overweight for excessive muscle mass.*

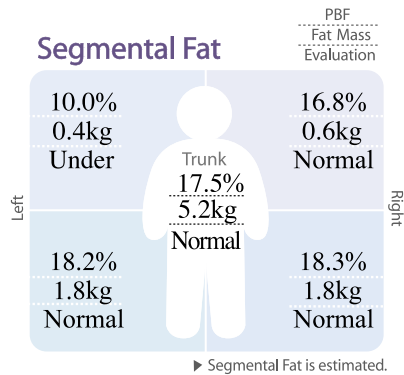
(8) Segmental Lean

'Segmental Lean' shows that the level of segmental muscle mass in consideration of an examinee's weight. Description of picture is followed as below.



(9) Segmental Fat

'Segmental Fat' shows segmental fat mass, Percentage Body Fat and its overall evaluation. Description of picture is followed as below.



(10) Fitness Score

The Fitness Score is offered in numeric value to help people remember the status of their body composition easily. This is the peculiar index of Biospace without any document or reference. Setting 80 as standard, less than 70 means 'weakness', from 70 to 90 means 'normal', greater than 90 means 'athletic type'.

Fitness Score	77 Points
---------------	-----------

(11) BMR (Basal Metabolic Rate, Kcal)

Basal Metabolic Rate is the minimal energy required to maintain life and homeostasis i.e. energy for breathing, heart activity, body temperature regulation and so on. InBody J10 calculates BMR as referring to Fat Free Mass (FFM) mentioned in the reference below.

Basal Metabolic Rate	1414 kcal (1348 ~ 1566)
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Ref. John J Cunningham. Body composition as a determinant of energy expenditure : a synthetic review and proposed general prediction equation. Am J Clin Nutr. Vol.54, 963-969, 1991.

** In general, Harris-Benedict Equation is used for BMR. This equation concerns gender, age, height and weight. However, calculating BMR with Fat Free Mass, which is the most active mass in a body, brings out more analogous results closed to the directly measured BMR.*

Also, respiratory gas analyzer can compute relatively accurate BMR.

(12) Exercise Planner

Exercise Planner Plan your weekly exercises from the followings and estimate your weight loss from those activities.

Energy expenditure of each activity (base weight : 59.2kg / Duration : 30 min./unit : kcal)							
 Walking 118	 Jogging 207	 Bicycle 178	 Swim 207	 Mountain Climbing 193	 Aerobic 207		
 Table tennis 134	 Tennis 178	 Football 207	 Oriental Fencing 296	 Gate ball 112	 Badminton 134		
 Racket ball 296	 Tae-kwon-do 296	 Squash 296	 Basketball 178	 Rope jumping 207	 Golf 104		
 Push-ups development of upper body	 Sit-ups abdominal muscle training	 Weight training backache prevention	 Dumbbell exercise muscle strength	 Elastic band muscle strength	 Squats maintenance of lower body muscle		

The number by the exercise picture is calorie spent when a examinee exercises for 30 minutes. The amount of body fat consumption for 4 weeks can be calculated as following example.

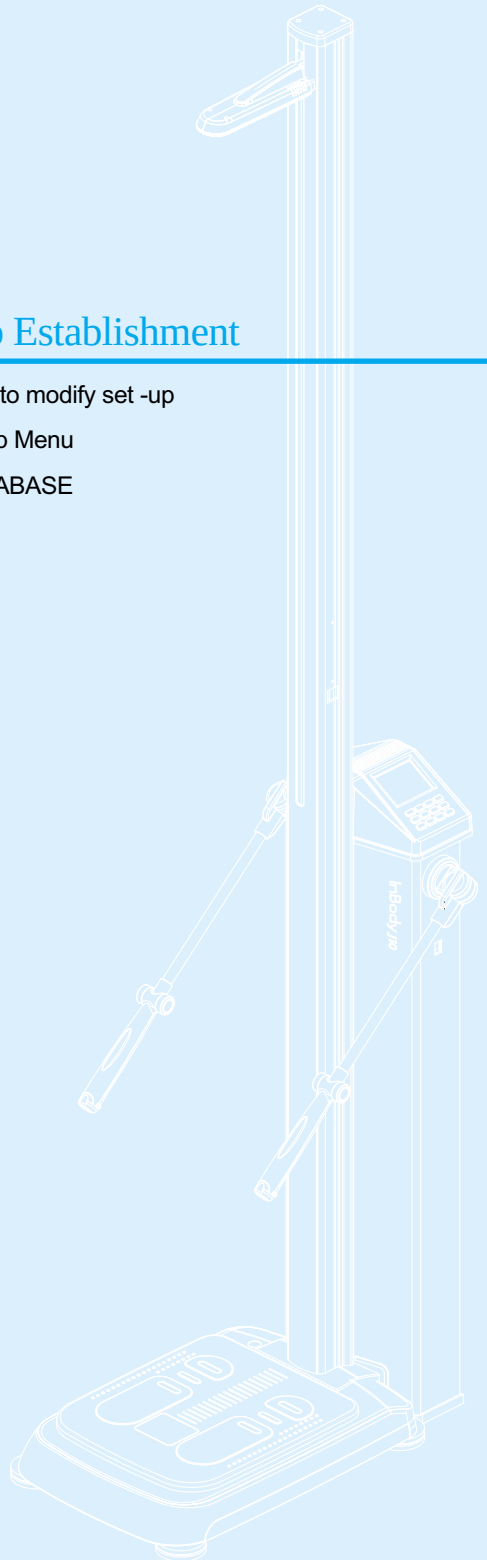
(13) Impedance

InBody J10 provides impedance of each segment at multiple frequencies.

Impedance						
Z	RA	LA	TR	RL	LL	
5 kHz	320,0	253,4	46,5	258,4	255,7	
50 kHz	275,1	229,3	34,0	222,9	223,0	
250 kHz	243,9	200,6	27,1	197,2	198,1	

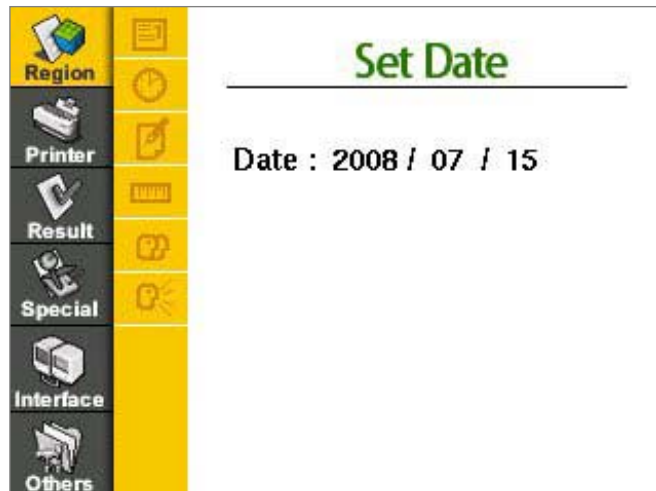
Chapter 3 Setup Establishment

1. How to modify set -up
2. Setup Menu
3. DATABASE



1. How to modify set-up

InBody J10 moves on the set up menu screen, by pressing SETUP(-1) button as shown below. InBody J10 set-up menu consists of Region, Printer, Result, Special, Interface, and Others.



- (1) Using (◀,▶) button, move on the menu and move down to sub-menu, with pushing (▶) button and make user's own set-up, changing the initially set options.
- (2) Press (▶) button to move on the section or step to be changed.
- (3) Press (▲,▼) or number buttons to change.
- (4) Move to the menu or sub-menu with (◀) button and choose the options to change with (▲,▼) button.
- (5) If set up change is done, press '←/EXIT' button.
- (6) In case of a pop up message asking if want to save the change of the set up, press 'DB/ENTER' button, or '←/EXIT' button to finish Set-up without change.

2. Setup menu

A. Region

Set the date, time, display mode, unit, ethnic background and language.

(1) Set Date

Set date, using (▲, ▼) button. Users can move to each section for year or month or date with pushing (◀, ▶) button.

(2) Set Time

Type the set time, using (▲, ▼) button. Users can move to each section for hour or minute or second with pushing (◀, ▶) button.

(3) Display Mode

Select the date display mode. 'yy' is for year, 'mm' is for month and 'dd' is for date (yy/mm/dd, mm/dd/yy, dd/mm/yy).

(4) Unit

Select units to be used(kg/cm, kg/in., lb./cm, lb./in.).

(5) Ethnic Background

Select the ethnic background of the examinee(Asian, Caucasian, African, Hispanic, Others).

(6) Language

Select the language to be used.

B. Printer

(1) Printer

Select the type of printer. Printers that support PCL and SPL are compatible with the InBody J10.

(PCL Compatible Printer, SPL Compatible Printer, SPL 2009 Printer)

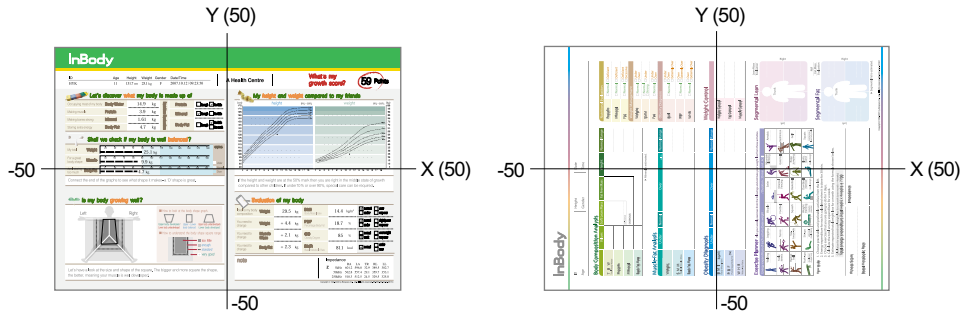
(2) Alignment

It is possible to adjust the coordinates on the result sheet. Use upper, lower buttons to adjust it for the desired location. Use left, right buttons to move between X and Y axis. The new adjustment can be previewed by 'Test Print'.

*The adjustment range - Result sheet for child: X(left, right), Y(upper, lower) +50~-50

Result sheet for adult: X(upper, lower), Y(left, right) +50~-50

After adjustment, you can check whether the alignment has done properly by 'test print'.



(3) Test Print

You may check whether the data is printed on proper location by printing sample data sheet. Press the 'DB/ENTER' button to print.

C. Result

(1) Number of Result Sheet Printing

You can decide the numbers of result sheet automatically printed after measurement. (0~2 sheets)

(2) Result Sheet

Select the basic result sheet to be printed.

- ① Child : Result sheet for child is printed.
- ② Adult : Result sheet for adult is printed. The age to distinguish between adult and children can be set up by choosing the number next to 'Adult'. For instance, if you set up Adult age(18), anyone less than 18 years old will have a report for a child, while those who are older than 18 years old will have an report for adult.

(3) BMI Basis

Select the standard range of BMI.

- ① WHO : The standard range is 18.5~25 kg/m².
- ② Asian : The standard range is 18.5~23kg/m².

(4) Growth Chart Option

- ① WHO Type : A type of a growth chart shown in a result sheet for child. It is a growth curve based on WHO.
- ② UK Type

D. Special

(1) Simple BMI Measuring Mode

- ① Disable : Once weight and height are measured, input personal information and start the InBody test.
- ② Enable : Once weight and height are measured, check the BMI value. You may start the InBody test by inputting personal information after getting the BMI value.

(2) Height Mode

- ① AUTO : The feasible range for height measurement is in total range. Measuring range is 950~2200mm.
- ② Manual : In this mode, you have to press 'DB/ENTER' button in order to start the body composition measurement after measuring weight. You may use this function when examinee takes time to take the proper pose for measuring height.
- ③ Input : You may input height without actual measurement.
- ④ Retry Message : From this option, you can select if you accept the result of measured height or not for body composition analysis. Press 'DB/ENTER' button for selection. You have to select specific measuring mode (Auto/Manual/Input) after change in this mode.

(3) I.D.

- ① INPUT: Input ID information of examinee.

(4) Set Gender

- ① Female: Gender is selected automatically as female and you cannot make changes.
- ② Male: Gender is selected automatically as male and you cannot make changes.
- ③ Last Gender: Lastly selected gender remains and you may change the gender.
- ④ Input: Input examinee's gender in each case.

(5) Keypad Option

The keypad of InBody J10 is available of inputting I.D. in numbers and letters. According to user's convenience, only numbers can be input by setting choice.

- ① Number & Letter : To input numbers and letters.
- ② Number Only : To input numbers only.

E. Interface

Set up InBody J10 network.

(1) Manual: IP, DNS, Net, GW, Host

Select when fixed IP is used. Same setup procedure is required as connecting to your PC.

(2) DHCP

DHCP (Dynamic Host Configuration Protocol) provides dynamic configuration of IP and related information. When network with DHCP server is used, you may get help from through DHCP server supervisor.

However, currently DHCP is not used on InBody J10.



Remember to restart InBody J10 after adding new information or modifying current information of the network server.

(3) Lookin' Body

Set connection with the computer which Lookin' Body program is installed.

- ❶ Disable: Disconnects with the computer. InBody J10 and Lookin' Body are not linked.
- ❷ Eternal (LAN)
- ❸ USB
- ❹ Serial

F. Others

(1) Measure Weight

- ❶ MANUAL: Once examinee stands on the base, press 'DB/ENTER' button to start the measurement.
- ❷ AUTO: Once examinee stands on the base, weight is measured automatically.
- ❸ INPUT: Without measurement of weight, the examinee input the weight by him/herself.

(2) Adjust Weight

Set the offset value of weight. Apply for weight adjustment when the additional weight could affect the result of the measurement; Offset value will be applied to the result. (adjustment scale: +5.0kg~-5.0kg, adjustment unit: kg/lb, one decimal place cf.0.1lb)

(3) Volume

Set volume of the sound. (0~10)

(4) Sound

Select the type of sound.

- ❶ Beep

(5) Initialize History

This is to initialize to the first stage by deleting total data stored in InBody. Press 'DB/ENTER' and initialize the data.

(6) Version

This shows the information of the program used on the machine.

I. Example of Setting

(1) Printing the adult result sheet for the examinee above 17-year-old.

- ① Press 'SETUP(-1)' button.
- ② Use ▼ and select 'Result'. Go to detailed menu using ► and select 'Result Sheet' using ▼.
- ③ Use ► and move to the page where you can select between 'Child' and 'Adult'.
- ④ Use ▼/▲ and select 'Adult'. You may set age when 'Adult' is chose. Move to 'age' using ►.
- ⑤ Set 'age 17' using ▼/▲.
- ⑥ Press '←/EXIT' when the right age is set.
- ⑦ Press 'DB/ENTER' and save. Program is set to print adult result sheet for examinee above 17-year-old.

(2) When you want BMI value just by measuring weight and height without other measurement.

- ① Press 'SETUP(-1)' button.
- ② Use ▼ and select 'Special'. Go to detailed menu using ► and select 'Simple BMI Measuring Mode'; Since this option is on the top of the menu you may not need to move the key.
- ③ Press ► and move to the page where you can select between 'Disable' and 'Enable'. Select 'Enable' by using ▼/▲.
- ④ Press '←/EXIT' when setting is completed.
- ⑤ Press 'DB/ENTER' and save. You may check the BMI value after measuring weight and height.

3. DATABASE

Press 'DB/ENTER' on the initial screen to open database. You may check the maximum number and actual number of data on the right upper corner.

DATABASE				3/100000
I.D.				Search ENTER
From	2008 / 06 / 01			
To	2008 / 07 / 15			
No.	I.D.	Gender	Date	
Reprint-1 Copy-3 Delete-5 I.D. Delete-9				
MODE:: Backup Restore All copy				

A. Searching Method

- (1) Input ID in 'I.D.' section or dates in 'From' and 'To' section then press 'DB/ENTER' to find the data you are searching for; Searched result will be displayed below. You may move from 'I.D.' section to 'From' and 'To' section by using 'DB/ENTER' button, and ► / ◀ between 'From' and 'To' section.
- (2) When you are searching by ID, searched result is listed in order of recent dates. You may move to specific date by using ▲/▼ button.
- (3) When you are searching by terms, searched result is listed in order of recent dates. You may move to specific date by using ▲/▼ button.
- (4) Press '←/EXIT' to go back to initial page.

B. Searched Result Control

You may choose one among print, copy or delete options by pressing appropriate button on the result page.

- (1) Reprint- 1
Print the result page.
- (2) Copy -3
Move the result to USB. File is saved in csv/LIB form in 'InBody' file. You may open the result through Excel (csv file) or Lookin'Body (LIB file).
- (3) Delete -5
You may delete the selected data.
- (4) ID Delete -9
You may delete the selected ID and its data.

C. Additional Function

(1) Setting

You cannot run the additional function when the cursor is in 'I.D.' section. Move the cursor to the 'From' and 'To' section and press 'Mode (-7)' to run the additional function program. Use ►/◀ to select among the options and press 'DB/ENTER'.

(2) MODE menu

- ① Backup: You may backup all measurement results from InBody J10 to USB. However, the saved data does not include the clinical data; ID, personal information and impedance data are saved. Use When 'Copy' function to each ID or 'All Copy' from the MODE menu when you want to save the data including clinical information.
- ② Restore: Connect the USB which was used for backup to InBody J10 and it will save the entire data to back to InBody J10.
- ③ All Copy: You may save the entire measurement results including the clinical data to USB.



NOTE

opening saved data on the computer

① On Excel

Connect USB which saved the DB to the computer and open; INBODY file can be found. Lookin' Body file and and csv file(db_backup.csv) which is named after the examinee is saved in INBODY file. Open db_backup.csv and you may check the data on Excel program.

② On Lookin' Body

Use 'USB-Convert' program when using Lookin' Body.

(Start>Program>Lookin' Body 3.0>USB_Convert)

Open USB_Convert and click 'Move to Lookin'Body' to move the saved data on Lookin'Body. You may check the data on Lookin'Body 3.0 when the data sent completely.



This message indicates that USB is not connected to InBody J10. Check the connection.



This message indicates that USB does not have enough space to save the data. Make sure to check the USB's capacity.



Restore function writes recently saved data over original file. Make sure to check before using this function since original data will be deleted.



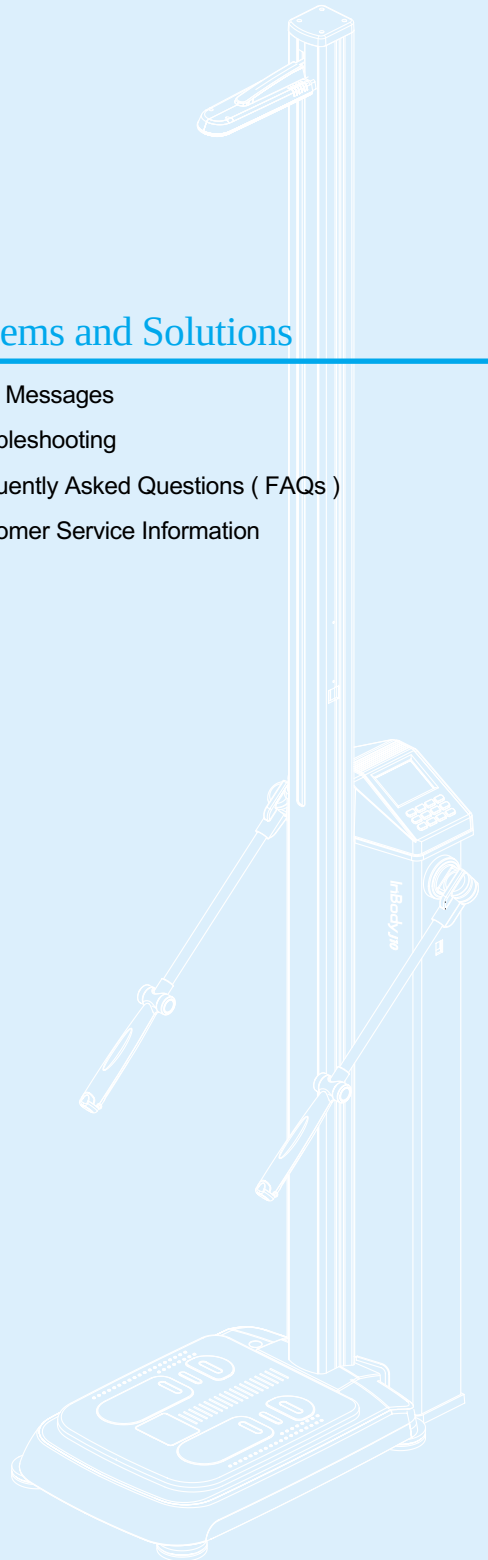
InBody J10 saves maximum 100,000 data. Use Lookin' Body to save additional data.



Inquire Biospace or the agency for more information about available USB equipment.

Chapter 4 Problems and Solutions

1. Error Messages
2. Troubleshooting
3. Frequently Asked Questions (FAQs)
4. Customer Service Information

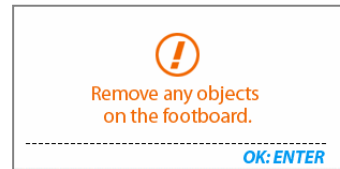


1. Error Messages

InBody J10 displays error message to alert problems and to recommend correct action.

A. "Remove any objects on the footboard"

This message appears when pressure or weight is applied to the base frame during selfcalibration. Restart after removing the material on the base frame. Please do not apply pressure or weight to the base frame during self-calibration.



B. "Wrong input data, Please do again"

This error message appears if entered examinee data are beyond acceptable ranges. When inputting examinee data, do not exceed the acceptable ranges of age and height , please refer to Chapter 2, section 3: "Personal Profile".



C. "Try again after wiping hands and feet"

This message shows up when the posture of the examinee is not appropriate or the examinee's palms or soles are too dry or have too much hard skin. Correct the posture of the examinee or wet his/her palms and soles with electrolyte tissues, before reinitiating the test.



2. Troubleshooting

This section lays out the order of steps you have to take in case of malfunction, assuming that you have some basic knowledge how to operate the equipment. If you still have problems after taking the following steps, contact Biospace.

A. The equipment does not seem to run, even the power is on.

(In normal situation, signal sounds and the LCD are on.)

Cause 1 The plug is not pushed all the way through the electrical outlet.

Action 1 Push the plug all the way into the electrical outlet.

Cause 2 Extension is not turned on (when using a surge protector) or the power does not flow into extension.

Action 2 Check if the power flows into the extension and the electrical outlet where extension is connected.

Cause 3 When adapter not provided by Biospace is used.

Action 3 Use only the adapter provided by Biospace.

Cause 4 Adapter is not tightly inserted into InBody J10.

Action 4 Insert the adapter into the power input port tightly.

B. The measured weight seems very low, or shows a negative value.

(Normally, measured weight is close to what the examinee believes his or her actual weight to be).

Cause 1 The weight sensor (loadcell) calibration was performed wrong during the selfcalibration.

Action 1 Turn off the power of InBody J10, then turn it on again. Allow the unit to perform self-calibration process again with no weight on the base frame.

The loadcell will be set to 0 kg. During self-calibration, even a small amount of weight will affect the calibration.

C. The analysis results are unexpected or unusual.

(It is uncommon to observe unexpected values. All analyzed values should not be beyond pre-determined ranges).

Cause 1 A examinee failed to maintain proper posture. He/She removed fingers or the sole of the foot from the tactile point of the electrodes.

Action 1 He/She must maintain proper posture until the analysis is completed. Refer to Chapter 2, section 4: "Proper Posture" for more information. If false analysis results repeat, contact Biospace.

D. The results sheet is not printed from printer.

(In normal situation, the results sheet is printed automatically after the measurement).

Cause 1 Paper tray is empty.

Action 1 Check if there is an indicator light or message on the printer. If the tray is empty, refill it with results paper. Be sure to place the paper properly in the tray (considering direction and surface orientation).

Cause 2 Printer cable is unplugged.

Action 2 Ensure the cable is connected tightly to InBody J10. Occasionally this may happen caused by bad cable. In this case, you must replace the cable.

Cause 3 Paper is jammed inside the printer.

Action 3 Check if the paper is jammed inside. Normally, you will be alerted by the indicator light or message. Remove the paper jam and re-try printing. Refer to the manual provided by the printer manufacturer.

Cause 4 Printer or InBody J10 setup is incorrect.

Action 4 If it is the wrong type of printer, the printer will not receive the signal from InBody J10. Refer to Chapter 3. "Setup Establishment."

E. Printing alignment needs adjustment.

(Normally, printing alignment correlates with each result item shown on the result sheet).

Cause 1 Occurs when graphs are not aligned with the result sheet.

Action 1 Use the arrow icons in Printer Alignment section of the Result Sheet Setup menu to adjust the alignment. The distance moved is shown based on an XYaxis coordinate system. The graphs are moved slightly each time the arrow icon is selected. Refer to Chapter 3, section 1: "Setup Menu."



When connecting a printer to InBody J10, turn on the power of the printer before InBody J10. When turning off the power, turn off InBody J10 before the printer. This process will minimize the harm to the equipment caused by electric shock.



Occasionally the printing direction can be problematic. Refer to the printer manual provided by its manufacturer.



Error messages and misprints are things that technical service representatives can examine in the process of troubleshooting. Keep them in safe or record.

3. Frequently Asked Question (FAQs)

Even if no problems arise from the equipment, users may still have many questions especially regarding clinical procedures. Below, just a few of the more common questions are listed with answers. If additional questions or more clarification is desired, please contact us by E-mail. The E-mail address for clinical questions is as follows:

E-mail: info@biospace.co.kr

A. Must socks or stockings be removed from the feet for analysis?

Bare skin contact is essential in the analysis using the BIA method. Socks or stockings may cause a certain amount of distortion in the results. Socks and stocking must be removed to obtain accurate data.

B. What are the circumstances where an analysis cannot be performed?

Examinees who have a pacemaker or other internal electronic medical devices should never use InBody J10. An accurate analysis cannot be obtained for children weighing less than 10kg. (22lbs) or people over 250kg (551lbs), or whom is shorter than 85cm (2ft. 9.5in). or taller than 205cm (6ft. 8.7in.) in height. If the examinee has a metal device embedded in the body, then the electrical current flow rate may be affected. Since InBody J10 calculates body composition based on flow rate from each part of the body, the error will be slight.

C. Can amputees or people who cannot stretch their hands or feet to the electrode be tested?

It is impossible to test people who cannot contact the electrode. Biospace has a lineup of products that conduct body composition analysis on the examinees in bed, without having to get examinees out of bed during the tests. For more information on this product lineup, contact Biospace.

D. Is the electrical current applied to a human body through electrodes safe?

The BIA method uses 330 of current which is negligible and will cause no harm to the humanbody. InBody J10 has acquired the CE and other certifies that assure the safety of the medical equipment.

E. Do accessories (jewelry, watches, rings, etc.) or any other metal objects worn by a examinee affect the analysis?

The ideal condition for the analysis is simply standing with no clothes (naked) and wearing no accessories. However, this may not always be possible. Therefore, we recommend a examinee remove as many clothing items and accessories that may affect the weight as possible. There will not be any problems as long as the accessories do not interfere with proper electrode contact.

F. How often does the examinee perform the analysis?

When the examinee is under treatment related to body composition, such as an exercise rescription, hormone prescription, or treatment for obesity and rehabilitation, the analysis should be performed once every two to four weeks.

G. What does the examinee follow for accurate analysis?

For accurate analysis, Biospace recommends the following:

- measure with an empty stomach
- measure 2 hours after a meal
- measure after urination and excretion
- to get net weight, remove heavy clothes or accessory
- do not exercise or take a shower before measurement
- measure after standing for at least 5 minutes
- do not measure after abruptly standing
- do not measure while taking a diuretic
- for female, avoid having measurement during menstrual period
- input accurate height
- keep room temperature at 20 °C ~ 25 °C (68 °F ~ 77 °F)
- warm up yourself for 20 minutes before a test in winter

4. Customer Service Information

Corporate agents of InBody J10 and addresses are listed below. Contact us for assistance or more information on InBody J10.

Biospace Co., Ltd.

518-10, Dogok 2-Dong, Gangnam-gu, Seoul 135-784 KOREA

TEL : 82-2-501-3939

FAX : 82-2-501-3978

Homepage : <http://www.biospace.co.kr>

E-mail : info@biospace.co.kr

Biospace Inc. [U.S.A]

4801 Wilshire Blvd. Suite 320 Los Angeles, CA 90010 U.S.A

TEL : 1-323-932-6503

FAX : 1-323-932-6506

Homepage : <http://www.biospaceamerica.com>

E-mail : USA@biospaceamerica.com

Biospace Japan Inc. [JAPAN]

Second Floor Ayabe Bldg., 2-17-3 Sotokanda, Chiyoda-ku, Tokyo JAPAN

TEL : 81-03-5298-7667

FAX : 81-03-5298-7668,7669

Homepage : <http://www.biospace.co.jp>

E-mail : biospace@biospace.co.jp

DaniSMC Co., Ltd. [Asia]

3th Floor J Bldg., 35-25 Jamwon-dong, Seocho-gu, Seoul 137-905 KOREA

TEL : 82-2-3462-5400

FAX : 82-2-3462-5105

E-mail : daniismc@danilsmc.com

EU Representative. [Europe]

DongBang Acuprime.

Gater House, Gater Lane, Palace Gate, Exeter, EX1 1JL, UK

TEL : 44-1392- 273908

FAX : 44-1392- 273909

E-mail : info@acuprime.com

Biospace China. [CHINA]

Block A, 26/F, Hai Xing plaza, No. 1 South Ruijin Road, Shanghai 200023, CHINA

TEL : 86-21-64439738, 9739, 9705

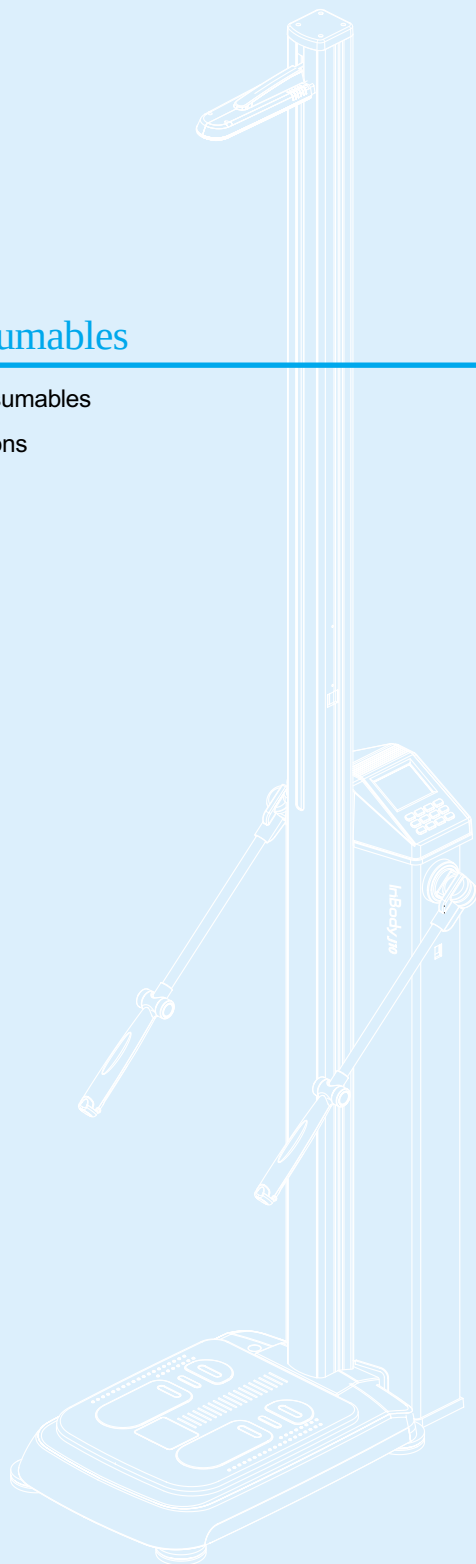
FAX : 86-21-6443906

Homepage : <http://www.biospacechina.com>

E-mail : [admin@ biospacechina.com](mailto:admin@biospacechina.com)

Chapter 5 Consumables

1. Consumables
2. Options



1. Consumables

A. Results Sheet

When using InBody J10 with a printer, it is strongly recommended to use the results sheet supplied by Biospace or from Local Distributor. If you use a common paper sheet such as A4 paper, it is very difficult to read the analyzed results.

Result Sheet Size : A4 (210mm × 297mm)

Number of Sheets : 500 / 1box

Printed Condition : 4 colors

Manufacturer for : Biospace Co., Ltd.

< Result sheet for child >

< Result sheet for adult >

2. Basic equipment

We recommend you to use InBody J10's compatible printer with designated printing desk. Please contact Biospace or an authorized distributor for details.

A. Printer

InBody J10 compatible printer should meet with the intent of IEC 60950(EN 60950). InBody J10 supports USB printers. For installation and usage of the printer, refer to the user's manual provided by the printer manufacturer.

Compatible Printers : Laser/Inkjet printers



Use only the printers recommended by Biospace.

B. Printer Desk

The printer desk supplied by Biospace has a drawer, which can be used for keeping results sheets. Also, printer desk minimizes vibration during printing. The exterior and specifications of the printer desk are:

Materials : E.G.I

Size : 480(W) × 400(L) × 710(H), unit : mm

Weight :13kg



To assemble the printer desk, refer to assembling guide printed on its carton.

3. Option

A. Lookin' Body

Lookin' Body is a database managing software, which stores the results generated by InBody J10. In addition, Lookin' Body keeps track of the measurement history of the patients and illustrates the results by period and category, with a lot of usual explanations. Lookin' Body will help you to provide more valuable consultation for your clients. System requirements for installation are:

- Operating system : Microsoft Windows 2000/XP compatible
- CPU : IBM-PC compatible computer with Intel Pentium III 700MHz or higher
- Hard disk : 800MB or more
- Memory (RAM) : 256MB or more
- Graphic cards and monitor: Screen resolution 1024 × 768, color depth 16 bit or higher
- Input devices : Keyboard and mouse
- Communication : Serial port (RS-232C)

Operating System	Windows2000/XP or Compatible
CPU	Intel PentiumIII 700Mhz of Higher, IBM-PC or Compatible
HDD	Intel Pentium III 700MHz or higher IBM-PC or Comaptiable
Hard disk	Minimum 800MB
Main Memory(RAM)	256MB or Higher Recommended
Graphic Devices	Supporting 1024X768 or Resolution and 16bit Color or Higher Recommended
Input Devices	Keyboard, Mouse
Communications Port	Serial Port(RS-232C), USB, LAN

A white line-art illustration of an InBody J10 bioelectrical impedance analysis (BIA) scale. The device consists of a large rectangular base with four feet, a vertical column, and a horizontal arm extending from the top. The arm holds two handgrips. Two long, thin electrodes are attached to the side of the column, extending downwards. A control panel with a small screen and buttons is located on the side of the column. The brand name 'InBody J10' is visible on the side of the column.

Appendix

1. More About InBody J10
2. Classifications
3. Specifications

Manufacturers Warranty

1. More About InBody J10

A. How does BIA work?

The Bioelectrical Impedance Analysis (BIA) method is based on the fact that the human body consists of conductors, and non-conductors.

Generally 50 ~ 70% of the human body consists of water which functions as a conductor, whereas body fat functions as a non-conductor.

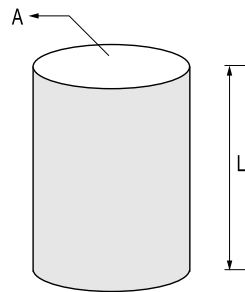
The classic BIA method measures the impedance of the whole body on the assumption that the human body can be considered as a cylinder for application of this model.

If A is the cross sectional area, and L is the length, the Impedance of the cylinder can be expressed as follows.

$$Z = \rho \frac{L}{A} \quad (\rho = \text{resistivity})$$

If both sides are multiplied by L, we get the new expression as follows.

$$V = \rho \frac{L^2}{Z} \quad (V(\text{volume}) = A(\text{Area}) \times L(\text{Length}))$$



According to this expression, if we know the L and the impedance value, we get the volume. That is to say, if we know the height of the human body (acting as a conductor), and know the impedance value, we can get the volume of body water. Here, the volume of water in the cylinder represents the volume of body water and the length of the cylinder represents examinee's height. Therefore, the two directly used variables in body composition analysis are impedance and height.

The principle of InBody J10's body composition analysis is explained as the following; The volume of body water, an electrolyte, is calculated first with measured impedance value. Then, we can get the value of fat free mass using the volume of body water. Fat mass is determined by direct measurement or deducting the fat free mass from entered weight.

Height should be entered by the user. Weight can be directly measured on InBody J10 or entered.

B. Core Technology

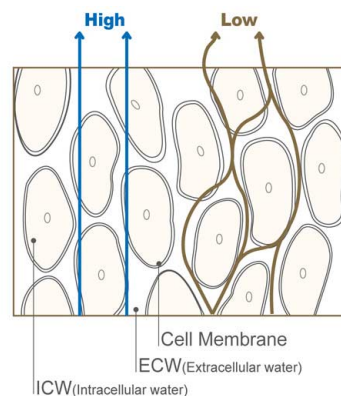
InBody J10, the most advanced Body Composition Analyzer available, utilizes state of the art technology, providing accurate reproducible data and diverse composition analysis that is of great use to professionals. This new technology is patented worldwide and has obtained the CE license and, royalty agreement with Yamato Corporation. The following are key features that make InBody J10 extremely convenient, timely, and most importantly, accurate.

(1) Multi-frequency Analysis

One setback of the former BIA method was the fact that it used only one frequency, 50kHz, which was ineffective in detecting the different electrical sensitivities in cell water.

InBody J10 adopts the Multi-frequency analysis method that measures inner and outer cell water.

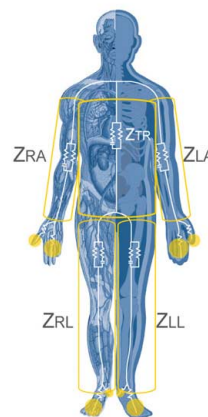
InBody J10 uses 3 different frequencies - 5, 50 and 250kHz in order to measure the impedance in the widest range. The Multi-frequency method more accurately measures body water.



(2) Tetrapolar 8-Point Tactile Electrode

It was a complex and inconvenient procedure to attach and detach the electrodes to a specific spot every time. Trained technicians were needed for each measurement. InBody J10 uses tactile electrodes to avoid the possibility of errors and inaccuracies resulting from the above procedure.

The 8-point Tactile Electrode method enables InBody J10 to efficiently produce accurate data every time.



2. Classifications

This product is classified as the following:

- Shock Protection: Class I equipment.
- Degree of Protection Against Electric Shock: Type BF Applied Part.
- Degree of Protection Against Harmful Ingress of Water: Ordinary equipment (enclosed EQUIPMENT protection against ingress of water)
- Degree of Safety in the Presence of Flammable Anaesthetic Mixture with Air or With Oxygen or Nitrous Oxide: Not suitable for use in the presence of a flammable anaesthetic mixture with air or with oxygen or nitrous oxide.
- Mode of Operation: Continuous operation.

3. Specifications

Measurement Method	Direct Segmental Multi-frequency Bioelectrical Impedance Analysis Method, DSM-BIA Method
Measurement Items	Impedance(Z): 15 Impedance Measurements by Using 3 Different Frequencies (5kHz, 50kHz, 250kHz) at Each 5 Segments (Right Arm, Left Arm, Trunk, Right Leg, Left Leg)
Electrode Method	Tetrapolar 8-Point Tactile Electrode System
Body Composition Calculation Method	No Empirical Estimation
Outputs	Height Total Body Water, Protein Mass, Mineral Mass, Fat Mass, Nutritional Evaluation(Protein, Mineral, Fat) Weight, Skeletal Muscle Mass, Body Balance Graph Growth Chart(Height, Weight) Weight Control BMI, Percentage Body Fat, Obesity Degree, Basal Metabolic Rate(BMR) Growth Score, Bioelectrical Impedance of Each Segments & Frequencies
For adult	Soft Lean Mass, Fat Free Mass, Waist-Hip Ratio(WHR), Exercise Planner
Applied Rating Current	400 μ A
Adapter	Power Input AC 100-240V~, 50/60Hz, 1.2A Power Output DC 12V, 3.5A
Display Type	320 × 240 Color STN LCD
External Interface	RS-232C 3EA, USB Slave 1EA, USB Host 2EA, Ethernet(10T) 1EA
Compatible Printer	Laser/Inkjet Printer (with PCL 3 or above, the printers recommended by Biospace)
Dimensions	360(w) × 640(L) × 2235(H) : mm
Machine Weight	29kg (63.9lbs.)
Measurement Duration	about 35 seconds
Operation Environment	10 ~ 40 °C, 30 ~ 75%RH, 70 ~ 106kPa
Storage Environment	-20 ~ 70 °C, 10 ~ 95%RH, 50 ~ 106kPa(No Condensation)
Weight Range	10 ~ 250kg(22 ~ 551lbs.)
Age Range	3 ~ 99years
Height Range	95 ~ 205cm(3ft. 1.4in. ~ 6ft. 8.7in.)

*Specification is examinee to change without prior notice.

Manufacturers Warranty

Product:

Serial Number:

Purchase Date:

Institute Name:

Biospace Co., Ltd.

518-10, Dogok 2-dong, Gangnam-gu, Seoul 135-854 KOREA

Tel : 82-2-501-3939 Fax:82-2-501-3978

Homepage : <http://www.e-inbody.com>

E-mail : info@biospace.co.kr

1. Biospace guarantees that the product has been approved through qualified test procedures under severe conditions.
2. The one year manufactures warranty begins on the date of purchase.
3. During the one year warranty period, Biospace remedies any original defect in material or workmanship.
4. The following defects or malfunctions will not be covered under the one year warranty:
 - Any defect caused by user's fault.
 - Any defect or damage caused by not following the instructions described in the user's manual
 - Any defect or damage caused by natural disasters (storm, flood, earthquake, etc.)
 - Any defect or damage caused by disassembly of InBody J10 or by modifying internal parts or program by unauthorized personnel.
5. An extended warranty may be purchased by executing an extended warranty contract after the initial warranty period.
6. No return is allowed after a product is opened. The proof of purchase must be accompanied before requesting service.
7. Please contact authorized personnel for any service calls.
8. The shipping stuff should be stated in here for malfunction or replacements.
9. Shipping charge is the customer s responsibility.

